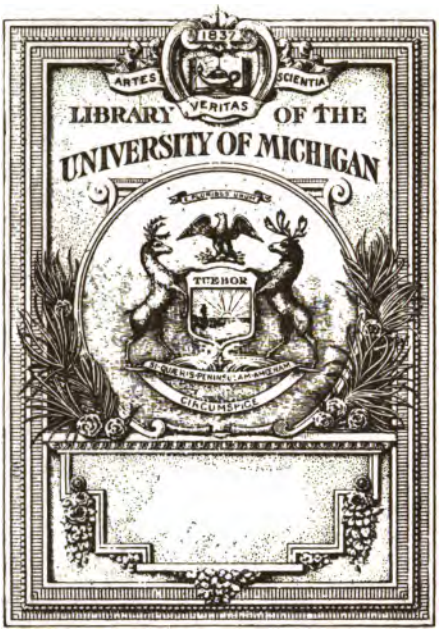
ELECTRICAL BUREAU

ANNUAL REPORT

PHILADELPHIA

1898.



FOURTH ANNUAL MESSAGE

OF

CHARLES F. WARWICK

Mayor of the City of Philadelphia

WITH

ANNUAL REPORTS

OF THE

DIRECTOR OF THE DEPARTMENT OF

PUBLIC SAFETY

AND

CHIEF OF THE

Philadelphia

ELECTRICAL BUREAU

FOR THE

YEAR ENDING DECEMBER 31, 1898

ISSUED BY THE CITY OF PHILADELPHIA, 1899

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CHIEF OF ELECTRICAL BUREAU.

PHILADELPHIA.

OFFICE OF THE MAYOR,

PHILADELPHIA.

Mayor:

CHARLES F. WARWICK.

Secretary:

JOHN K. McCARTHY.

Chief Clerk:

HARRY C. GILL.

Contract and License Clerk:

JOSEPH F. JONES.

Stenographer and Typewriter:

HENRY W. PEIRSON.

Ass't Stenographer and Typewriter.

HARRY M. FISLER.

Messenger:

WILLIAM G. LEE.

FOURTH
ANNUAL MESSAGE

OFFICE OF THE MAYOR, CITY HALL.

Philadelphia, April 3, 1899.

TO THE SELECT AND COMMON COUNCILS
OF THE CITY OF PHILADELPHIA.

GENTLEMEN:—In accordance with the provisions of the Act of Assembly of June 1, 1885, I herewith transmit to your Honorable Bodies this my Fourth Annual Message, upon the financial and general conditions of the municipality. I also send the Annual Reports of the Directors of the Departments of Public Safety and Public Works and of the President of the Department of Charities and Correction, for the year 1898.

FINANCE.

The annual report of the City Controller shows that the total receipts of the City from all sources for the year 1898 were $26,324,200.09, and the total expenditures $27,075,013.76, showing an excess of expenditures over receipts of $750,813.67.

The deficit thus shown was ascertained when the books of the Controller's Department were closed, dating from December 31, 1898, and it is attributable to the absence of the personal property tax and school moneys due the

City of Philadelphia by the State authorities, for the year 1898, amounting in all to $1,596,730.83.

This apparent deficit, however, which appears upon the face of the report, is susceptible of explanation. It is due to the fact that the personal property tax and the school moneys due the City of Philadelphia by the State authorities for the year 1898, amounting to $1,596,730.83, have not all been paid. Since the Controller's report was submitted, there have been made small remittances, but at the time of the signing of the report there would have been a surplus of $1,156,448.63, had all the money due been paid. This shows but a little improvement over the preceding year. The system is vicious and without excuse and the retention of this money upon the part of the State authorities cripples the Municipality in the matter of appropriations and reflects upon the business management in the financial departments of the State Government; further than this it seriously affects the credit of the City. The reason for this apparent deficit has to be constantly explained. The City Treasurer has repeatedly made demands for the payment of the money, but his appeals have met at no time with a hearty response, in fact at times not even with an explanation. The law under which the City pays this money to the State, requires that, immediately upon payment by the City to the State, of the whole amount due, the latter shall remit the proportionate share to which the Municipality is entitled. There is no good reason so far as has been ascertained why this money should be withheld. The money under no circumstances should be devoted to any purpose other than that which the law designates. If it cannot be diverted to any other purpose, then its retention is illegal and unjust. It would be a decided reform if the Act relating to this matter were amended. The money should be retained and accounted

for by the City and a credit given for the amount of the same upon the books of the State. In other words, to remedy this condition of affairs, the law should provide, that the City instead of paying all the money to the State, should retain that proportionate share to which she is entitled. The system is unbusiness-like. If the money belongs to the City, it should be in her hands, and the State officials who have it in their possession should return it at the earliest moment possible. This is not a new condition, it has been persisted in for years and public attention has been frequently called to the matter. I have taken occasion to repeatedly refer to it in the several messages I have submitted to your Honorable Bodies. In the reports of the City Controller for the past two years it will be seen that under the opinion of the City Solicitor, and a resolution of your Honorable Bodies, he has carried this money as an asset of the City, though actually in the hands of the State officials. This year, however, he refused so to do, stating in his annual report that he deemed it inadvisable to continue this method. He was therefore compelled to ask for a reduction in the appropriations for the ensuing year, which resulted in great inconvenience to the City and in delay in the transaction of her business and the meeting of her obligations. The books of the City Controller could not be opened for the current year, until the deficiency was made up by a reduction in the appropriations made by Councils.

As to the Personal Property Tax the City always makes the remittances prior to November 30th, the close of the fiscal year of the State, and the money which under the law belongs to the City should at least be returned before the 31st of December, that day marking the close of the fiscal year of the Municipality. As to the school tax the payments should be made in the same way, bearing in

mind of course the fact that the school year ends on the 30th of June. There is no excuse for the further continuance of a practice which puts the City to inconvenience affects her credit and gives rise to suspicion and scandal.

In 1896 the deficit was $1,459,569.03; in 1897, $828,-325.61; in 1898, $440,282.20. If the moneys due had been paid in 1896 there would have been a surplus of $141,578.59; in 1897, of $839,217.48, and in 1898, of $1,156,448.63. These facts I am sure will prove to every fair minded man that the system needs immediate change and reform.

The funded debt of the City, January 1, 1899, less the City loans held by the Sinking Fund Commission and including outstanding warrants, was $36,380,082.77; the funded debt, January 1, 1898, less the City loans held by the Sinking Fund Commission and including outstanding warrants, was $39,174,353.75; showing a decrease of the total debt, since January 1, 1898, of $2,794,270.98. The additions to the funded debt during 1898 were $2,-211,900, made up in the following manner: Of the $6,000,000, Philadelphia and Reading Railroad Subway Loan of March 15, 1894, there was issued on account, $900,000; for refunding loan, $1,306,000, and an unclaimed Matured Loan amounting to $5,900. The amount redeemed during the same period was $7,843,400, making a decrease in the Gross Funded Debt for the year of $5,631,500. Deducting the City securities held by the Sinking Fund Commission from the Gross Funded Debt leaves a Net Funded Debt of $35,163,295.22.

The value of the real estate owned by the City as appraised by the Board of Revision of Taxes for the year 1898 is $55,975,494, showing an increase over the appraisement of 1897 of $2,181,185.

Loan Bill.

The Loan Bill is an old question but it is a matter of deep interest to this community. It dates back to the beginning of this administration, and although I have heretofore often referred to it, in detail, it is of such vital importance to the future of the City, that it will not be out of place for me to again give, briefly, its history. Upon this measure depended the ability of the present administration to carry out its promises and its purposes, and it is with keen regret I am compelled to state, that because of unreasonable opposition, we were prevented from inaugurating the projects and reaching the results we so hoped for and desired.

In 1896, after most careful consideration an ordinance was passed in Councils providing for the creation of a loan of $8,000,000 for miscellaneous purposes. Shortly afterwards another ordinance was passed, authorizing a loan of $3,000,000 for the improvement of the water supply. When everything was in readiness for the placing of the loans, and advertisements for bids were about to be made, the question was raised in some quarters, that the City, under the law, had no right to increase her indebtedness, it being contended that she had reached the limit of her power to borrow. A doubt having thus been raised, which might seriously have affected the loan in the matter of premiums and rate of interest the City was compelled under the circumstances to wait until the question was passed upon by the Courts. A Bill in Equity was filed in the Court of Common Pleas No. 1, and it was held that the City had not reached the limit of her borrowing capacity. It was then urged that this opinion was not final and the judgment of the Supreme Court had to be secured. In May, 1897, that Court decided that before the City could in-

crease her indebtedness, the question would have to be submitted to a vote of the people. The first election at which this could be done did not take place until the following November, and in the meantime matters had to remain in abeyance.

The bill in its every item and feature was fully explained in the newspapers and discussed in public places and the people were intelligently informed as to every detail. They decided in favor of the creation of the loan by a majority of 17,475. The matter had been considered for upwards of three years and after this popular expression in its favor it was thought that opposition would cease, but the Schuylkill Valley Water Company in the meantime had appeared upon the scene and opposition was immediately organized to defeat the ordinance authorizing the creation of the loan. This was in the face of the mandate of the people.

At this point it may be in place to state that the loan provided for necessary improvements in every direction; among other things, for the completion of the Boys' High School and the erection of new school buildings; for the building of main sewers; for the completion of the Aramingo canal sewer; for the improvement of suburban roads; for the erection of an Art Gallery, and a Free Library; for a new Almshouse; for the abolition of grade crossings on the line of the Philadelphia and Trenton Railroad; for the equipment and building of the Philadelphia Museums; for the extension, improvement and filtration of the water supply; for the extension of Fairmount Park; for repaving streets, tramway streets, intersections and underground work incident thereto; for building bridges; for the improvement of public parks and squares; for the purchase of ground and the building of fire and police stations and electrical and underground construction; for grading and repairs to paved streets, curved curbing, resurfacing as-

phalt streets; repairs to bridges; repairs to sidewalks; repairs to ditches and sluices; and for repaving with improved pavement small streets, forty feet or less in width, from house line to house line, and the underground work incident thereto. It will be seen that these improvements were urgent and in every way would have resulted materially in the advancement of the City. All kinds of objections, however, were raised in opposition by the enemies of the bill. It was contended by those who knew better that the bill creating the loan carried as well an appropriation for every item. This was not so, for the bill pending provided only for the creation of the loan; every item of appropriation thereunder must be passed upon by Councils separately. After stormy contention the bill at length passed on June 17, 1898, and the same day I affixed my approval thereto. It must be borne in mind that the friends of the bill, in Councils, twice authorized the creation of the loan, but after each victory, outside parties instituted or inspired litigation for the purpose of delay. An effort was made to meet at once the most important question namely, that of the water supply, but the opposition filed a Bill in Equity praying the Court to restrain the City in the matter of the placing of the loan, and again the City was halted and prevented from carrying out those projects that would have resulted in her material development and advancement. This spirit of opposition, dead to every public sentiment, actuated and controlled by spiteful, unreasonable, factional or sordid motives is responsible for the City's failure to respond to the demands of her citizens for needed public improvements. The opponents of this bill, have for years, held the City by the throat like highwaymen and have checked her progress at every step. Their policy was delay and destruction; little cared they for the fame and reputation of the City. The New High

School Building half completed, because of their opposition, stands to-day like a ruin. Thousands of children have been deprived of proper school accommodations, public work in every direction has been delayed and the City's progress retarded. They have made unavailable the sum of $3,700,000 for the improvement of the water supply. No appeal could reach the consciences of such men; in spite of public clamor and in the face of sickness and death they have stood unmoved.

DEPARTMENT OF PUBLIC SAFETY.

The Department of Public Safety has reached a high degree of efficiency throughout all its Bureaus. The Director has been unceasing in his efforts in the public service and as he retires from the position he has so ably and conscientiously filled, it must be to him a satisfaction to know that he has been faithful and loyal in the discharge of his duties.

Bureau of Police.

I cannot speak too highly of the police force of this City. It has, during the past year, been put to a severe test, and yet from every side it has been highly commended for its efficiency in the handling of crowds and in the preservation of order. There has been created an "esprit de corps" throughout the Bureau; the men have been carefully drilled and have been taught to be attentive and courteous to strangers as well as to citizens. The Superintendent is worthy the highest commendation.

I cannot lose this opportunity, to speak of the services rendered by the force during the summer vacation. There were 10,723 dwelling houses temporarily closed during that period, and left under the care and protection of

the police. Twenty-seven of these houses, seven less than last year, were robbed of goods valued at $3,874, of which $2,016 were recovered.

After the cessation of hostilities in the late war with Spain there were brought into this City between the 21st of August and the 27th of September of last year 1,575 sick soldiers. The reception and disposition of these soldiers were in the hands of the authorities of the City, and the services rendered by the police force in this delicate and patriotic work called forth from all our citizens, as well as from the army officials, the highest praise and commendation.

The duties that policemen and firemen are called upon to perform expose them to constant dangers, and there can be no greater charity, than to provide a fund for the relief of the families of those, who are left, in case of death, or for the men themselves if they be injured in the service. Some of our citizens have shown a proper public spirit, by giving handsome donations to the Pension Funds, and have thus set an example that should be followed by others.

The police force to be made more effective and to give more security should be increased, especially in the outlying districts.

Bureau of Fire.

This Bureau, under the immediate direction of its brave and efficient chief, has reached a most excellent state of discipline and efficiency. The total number of fires during the year was 2,484, being 57 more than occurred during 1897; the loss on buildings and contents was $1,653,902, while that of the previous year was $1,026,768.

In my last annual message, I called attention to a new danger that had arisen owing to the erection of very high buildings in the business sections of the City. For the better protection of these buildings, a greater supply of

water is required as well as greater force, and I cordially endorse the suggestion of the Director of the Department of Public Safety, when he urges that large mains should be laid from the Delaware river to Broad street, on Market, Chestnut and Arch streets, with a pumping station at the Delaware river, and a similar line of mains on the same streets from the Schuylkill eastward to Broad street, with a pumping station on the Schuylkill river. This would be a means of great safety in the business sections of the City.

During the past year there were 300 firemen injured in the performance of their duty. There were two deaths in the Bureau, which occurred when the men were in actual service. This is additional reason why our citizens should bear in mind the Fire and Police Pension Funds. There is not a more courageous or heroic body of men, in the public service, than the fire force of our City.

Electrical Bureau.

The Electrical Bureau still maintains its reputation as one of the best equipped in this, or any other country. At the close of the year there were 7,147 electric lights in the public highways of this City, providing not only illumination, but giving protection to life and property. It will be admitted by those who have examined into the matter by personal inspection, that Philadelphia is the best lighted City on this Continent.

The underground system is making gradual progress. There have been taken down and removed from the streets 119 poles and a little over 160 miles of telegraph and telephone wire belonging to the City, and 57.71 miles of wire belonging to the different corporations. The number of calls over the police signal and telephone service during the year was 5,207,553.

The rules established in this Bureau in the matter of

the introduction of underground trolley wires, have prevented damage of every kind resulting from what is called electrolytic action. The City's underground system of gas and water pipes and cables has been protected from injury. The construction has been made under the supervision of the able Chief of this Bureau, and has resulted in great saving to the City. In many cities throughout the country the leakage of currents from the trolley service, which has not by the adoption of a proper system been provided against has greatly destroyed the iron and lead pipes laid underground. Such a condition with us has been avoided by carrying out to the letter the wise rules promulgated and enforced by this Bureau.

Bureau of Health.

The General health of the City during the year was good. It will be seen by the report of this Bureau that the death rate for 1898 was 19.18 per 1,000 inhabitants, which although slightly higher than for 1897, which was 18.72, is lower than for any year since 1879. The death rate of Boston for 1898 was 20.09 per 1,000 inhabitants, for New York, 19.28.

Small-pox made its appearance, but it was stamped out by the effective measures that were immediately applied. I am glad to see that there has been an improvement in the condition of the Municipal Hospital, but still there is much work to be done in that direction. Once again, I call attention to the importance of erecting a hospital removed from all connection with the Municipal Hospital, and placed in an outlying locality, for the treatment of small-pox cases. This is a most important matter.

The Board of Health was abolished by Act of Assembly of March 22, 1899, and a Bureau created by an Act passed the same day. The members of the Board, five in number, gave at all times loyal and devoted attention to the duties

assigned them. They served most faithfully the interest of the City and without compensation.

The Bureau was immediately organized as the Act provided and Colonel J. Lewis Good was appointed chief of the same.

Bureau of City Property.

The chief of this Bureau has with marked intelligence discharged every duty. The restoration of the old State House has been completed and its rededication took place on the 28th day of October last, as a feature of the ceremonies incident to the celebration known as the "Peace Jubilee." The immediate locality has been greatly improved by reason of the restoration. This is the most sacred relic and the most interesting and historic building in this country and should ever be preserved with patriotic care and devotion. I am glad to take this opportunity to thank the committee of citizens and the Association of Architects, for their valuable suggestions and assistance during the continuance of the restoration.

The market sheds on the different thoroughfares throughout the City are in many instances dilapidated and virtually unproductive; they should be removed and the streets paved. I think, however, that the historic building at Second and Pine streets should be repaired and retained as an old land mark.

League Island Park should be improved at the earliest possible moment. It will add much toward the development of the lower section of the City. The plan for its improvement is feasible and the Park may be made attractive in every way as a pleasure ground and public resort for the people. Plans have already been agreed upon and it is to be hoped that the matter will be pushed without delay. The preliminary work should begin as soon as the weather will permit.

Bureau of Building Inspection.

The work of this Bureau is most intelligently performed under the direction of its able and experienced Chief. The ordinance of April 10, 1894, which authorized the inspection of elevators, as I have already said, in my two previous messages, cannot be carried out, because the force of Inspectors is totally inadequate. The ordinance provides that every elevator shall be inspected by the Bureau of Building Inspectors, at least, once every three months. There are over ten thousand elevators in the City of Philadelphia and only three Inspectors. This statement will prove conclusively that the ordinance is virtually a dead letter. This should not be the case as the constant and universal use of elevators is dangerous, in the extreme, unless every precaution be taken to guard against accident.

Bureau of Boiler Inspection.

The Chief of this Bureau has faithfully conducted its operations; he is one of the oldest officials in continuous service in this City. The total number of boilers inspected was 2,946. It might be well to add in this connection that the Bureau inspected the boilers of 143 locomotives that had been built for and shipped to Russia and Japan.

DEPARTMENT OF PUBLIC WORKS.

The Director of the Department of Public Works has been a loyal and devoted public servant; he has ably and conscientiously discharged his onerous duties. It will be shown by a careful examination of his report that the work under this Department has been well done and at lower figures than, in any year during its previous history. Unfortunately there has been no money available for the extension and improvement of the water system.

nor for the construction of main sewers and bridges nor for the paving of streets with improved pavement.

Bureau of Highways.

The Loan Bill contained items amounting to $2,550,000, which could have been made available for the improvement of our highways if the matter had not been interfered with by litigation. The total paving and repaving for last year covered 31 1-3 miles and cost in the aggregate $499,436, of which amount $430,367 was assessed against the properties abutting on the streets paved. But little repaving was done during the year, as the only appropriation available for this work was $20,000, for repaving small and tramway streets, and $25,000 for repaving Christian street, from Sixteenth street to Twenty-first street, and from Twenty-second street to Gray's Ferry road.

One of the most important matters under the direction of the Bureau of Highways is the repaving with improved pavement the streets at present paved with cobble and rubble stone, but this work will have to be suspended until the money under the loan bill becomes available. The report of the Director in relation to the work done under the Bureau of Highways is most interesting, and I ask a careful examination of the same. The Chief of this Bureau has ably discharged his every duty.

Bureau of Street Cleaning.

Under this Bureau during the year 1898, there was expended for the cleaning of streets and inlets, removal of ashes, etc., $540,474, and for the removal and disposal of garbage, $328,600; making a total of $869,074. There were cleaned during the year 217,389 miles of streets and 2,133,792 inlets; 588,954 cart loads of ashes were collected, and 201,958 loads of kitchen garbage. These

figures will give an idea of the amount of work done under this Bureau, and yet there were received only 1,850 complaints of all kinds, being 551 less than were received in 1897. The records show that this is the smallest number of complaints received by the Bureau during any previous year. I take pleasure in referring to these facts, and I congratulate the Chief of this important Bureau upon this showing. It is worth mentioning in this connection that for the year 1899 contracts have been awarded for cleaning streets, collecting and removing ashes, etc., for the sum of $510,722, which is about $30,000 less than the contract price for the year 1898. This is the result of active competition among the contractors, not because there has been any decrease in the work, nor any change in the specifications.

Questions have been raised many times, as to whether or not the contract system is better than the system adopted in New York, under which the head of the Bureau is authorized to employ men directly for the doing of the work. In this connection, I may say that the City of New York, and by this I mean Manhattan Island, not Greater New York, with an area of less than one-half of that of our City, pays in the neighborhood of $3,000,000 for the cleaning of the streets alone, not including the removal of ashes, and after having had an opportunity of studying the features of both systems, I believe the contract system is cheaper, less liable to be affected by political influence and can be made in every way as effective as the so-called New York system. Great discretion however must be exercised by the head of the Department in awarding the contracts to the lowest responsible bidder, fully appreciating the meaning of the word "responsible." The unfortunate feature of the contract system is that competition sometimes induces contractors to make bids at too low a figure. They hope to be saved from loss by

shirking or neglecting the work. This requires greater vigilance however, upon the part of the City's inspectors, to enforce a faithful compliance with the terms of the contracts.

We have had an exceptional experience this winter in the matter of the removal of snow. We may not for years, again, have such a season, but the lesson teaches us that we should be prepared to meet all conditions and that a larger appropriation should be made annually for the removal of snow from the public highways, at least, in the business sections of the City. The appropriation last year was $10,000, which was exhausted after the first snow fell, long before the close of the winter.

Bureau of Surveys.

I cannot praise too highly the work done by this Bureau under the direction of its able and experienced Chief Engineer. The expenditures of this Bureau during the past year were $2,886,236.05, of which amount $2,625,107.23 was expended for permanent improvements. All the work upon the main sewers in process of construction at the time of the last report has been completed. By ordinance approved July 20, 1898, Councils authorized the construction of fifteen main sewers including the extension of the Aramingo Canal and the Wingohocking systems. The estimated cost of this work is $500,000. The plans, in fact all the preliminary details have been completed, but the work cannot begin until the appropriation under the loan bill is made.

The work of making connections with the Intercepting Sewer is being steadily pushed forward, but the appropriation for the extension of this most important system during the past year was only $20,000, an amount totally inadequate to do the work required. This is a most important feature in relation to the improvement of the water

supply and should receive the early and favorable consideration of Councils; during the year 1898 this sewer and its branches were carefully inspected and wherever necessary were thoroughly cleaned; to-day they are in perfect condition and fully meeting the purposes of their original construction.

The building of main sewers in the outlying districts is also a matter of great moment and should receive early attention.

The work on the Pennsylvania Avenue Subway has been industriously continued and it is now rapidly approaching completion. No greater piece of engineering work has been done by the City during this generation. It has resulted in vastly improving property in its immediate locality, has removed many very dangerous grade crossings; has opened travel upon the streets without interruption; has provided a more imposing entrance to Fairmount Park and has made Broad street one of the finest avenues in the world. During the Peace Jubilee the processions, miles in length, were enabled to keep up their line of march without a break.

The grade crossings on Ninth street should be removed at the earliest moment practicable. Provision has been made under the Loan Bill for the abolishing of grade crossings on the line of the Philadelphia and Trenton Railroad.

Great improvement to the channels of the Delaware and Schuylkill rivers, has been effected under the several contracts for dredging said rivers which were in force at the beginning of the year. In a short time, the Delaware river will have a channel 600 feet in width and 26 feet in depth at mean low tide, from the City to a point below Chester, and the Schuylkill river will have a channel 250 feet in width and 22 feet in depth at mean low tide, from Penrose Ferry bridge to a point near Fifty-eighth street,

and 150 feet in width and 20 feet in depth at mean low tide, from Fifty-eighth street to a point near the Baltimore and Ohio Railroad bridge.

The City should make every effort to secure from the National Government an appropriation sufficient to provide a channel in the Delaware river, 30 feet in depth, from the harbor to the sea. This will not only benefit the City but will be of great advantage, to the West, in that it will provide an additional outlet for the products of that great section, to the markets beyond the Atlantic. This is a national development and upon this ground the assistance of the National Government should be invoked.

For the widening of Delaware avenue the City appropriated under the loan of January 13, 1896, $1,500,000, and the Board of Directors of City Trusts, Trustees of the estate of Stephen Girard, joined with the City in the work and set aside the sum of $650,000, making a total amount available of $2,150,000. The improved and changed condition of affairs in that locality, between Vine and South streets, gives now every opportunity to, and provides every convenience for, our commercial interests. These improvements ought to mark the opening of a new era in Philadelphia commerce. An ordinance is now pending in Councils for the widening of Delaware avenue, from Vine street to Green street; this will be of great advantage to the business interests of the City.

The foundation piers and abutments of Gray's Ferry bridge are all completed and the metal superstructure is being erected. It will require about $100,000 for the completion of the work. Negotiations for some time past have been pending with two railroad corporations to provide this amount, but unfortunately an agreement has not yet been concluded.

Bureau of Water.

The Chief of this Bureau has conducted it with intelligence and fidelity. The total number of gallons of water pumped during the year was 102,241,835,372. The average daily pumpage was 274,670,777, an increase of 17,152,103 gallons daily over that of the preceding year. The average daily consumption during the year 1898, estimating the population of the City at 1,400,000, was 196.2 gallons per capita per day, an increase over the year 1897 of 10.4 gallons per capita per day, and an increase over 1895, the first year of this administration of 35.9 gallons per capita per day. This tremendous increase must impress every intelligent citizen with the necessity of providing some means to prevent excessive waste. In my previous messages, I have always contended, that the Schuylkill river supply was sufficient and would be sufficient for generations to come, provided it was economically used. I think it will be admitted by every one that the use of 196.2 gallons per capita per day is both excessive and extravagant. A system of metering properly introduced would tend to make the people careful of the use of the water, but would not in any wise deprive them of all that was necessary. It would simply prevent waste. The Schuylkill river as I have already said is sufficient so far as quantity is concerned and the water good as to quality, if it were made clean and wholesome. Scientific men everywhere have pronounced in favor of filtration and it is claimed that a proper system will answer every purpose in this City.

The past year shows an increase of $94,308.34 over the previous year in the matter of receipts and a net revenue of $1,569,669.02 over all expenditures for permanent improvements of every character and cost of maintenance.

The total receipts of Bureau of Water during years 1895, 1896, 1897 and 1898 were		$11,746,013 81
Current expenses during the same period,	$5,532,462 46	
Paid for extensions during the same period	1,351,523 68	
Total		6,883,986 14
Net profit in four years		$4,862,027 67

A Bureau of the City Government that shows such returns should receive support in the matter of sufficient appropriations for permanent improvements, but unfortunately our requests have not been complied with.

If a fair portion of the net profits of this Bureau, nearly $5,000,000.00, during the past four years, had, in answer to our appeals, been appropriated for the improvement of the water works, they would not be in the deplorable condition they are to-day, but these profits were diverted to other purposes and the works neglected and starved.

At the Roxborough Pumping Station we require four 5,000,000 gallon pumping engines. The largest engine at this station of 12,000,000 gallons capacity is continually breaking down, the work it has to perform is too hard and continuous, it requires frequent repair and in the near future will collapse, unless relieved. Such an accident would be disastrous to the people in Germantown, Chestnut Hill, Mt. Airy, Roxborough and Manayunk. At the Belmont Pumping Station two 10,000,000 gallon pumping engines are needed. A 5,000,000 gallon pumping engine at the Roxborough High Service Station is needed and another of like capacity for the Belmont High Service Station. There are other improvements required which are referred to in detail in the report of the Bureau, such as engine houses, pumping mains, etc.

Nothing in my judgment is of greater need in the matter of the improvement of our water than subsiding reser-

voirs, and in this connection I desire to say that the Queen Lane Reservoir has been of great benefit and would fully answer the purpose of its original construction if the demand upon our supply were not so great. The water, unfortunately, so soon as it is pumped into the basin is withdrawn for consumption, before it is given time to subside.

The great pity is that we have not more reservoirs of like capacity distributed throughout the City.

The most important matter for our consideration at this time is the water question. The conditions are such to-day that the fame and reputation of the City are at stake and something must be done.

We must bear in mind, however, that no one to-day possesses the miraculous rod of Moses with which to strike the rock and have the waters gush forth in abundance.

No matter what plan may be adopted it will take some time for its introduction, and in the meantime it behooves us to act with wisdom and judgment. The reports that have gone abroad, many of them, no doubt, greatly exaggerated, have had a bad effect and in time will seriously injure the business interests of this community and result in having strangers avoid this city as they would a pest-house.

There are two plans for the solution of this question, one is to improve our present system and the other is to bring a supply from another source.

If a pure and adequate supply could be brought from the northern counties of the State or the upper Delaware this unquestionably would be the plan to adopt. I think it will be admitted, however, that this plan at present, is not practicable, in view of the expense incident to its adoption. If this plan then be not feasible, we are driven to the first proposition, that is, the adoption of a system of filtration and the construction of subsiding reservoirs.

From the very beginning of this controversy, I have

urged this plan as the immediate solution of the question.

In my first annual message for the year ending December 31, 1895, I said that "the administration has been devoted and loyal in its efforts to meet this question fairly and to settle it with the best judgment it can command. The matter is so plain that it has gone beyond the limit of argument and now needs earnest and immediate action. The introduction of the best system based upon scientific opinion and honest experience should be had at once." I further added that "all are deeply interested in the early introduction of a general system of filtration that will provide for the use of the people clean, pure water for drinking, bathing and cooking purposes."

In my second annual message for the year ending December 31, 1896, I said "a supply of pure potable water is the greatest need of our City at this time. The supply has been very much improved by the construction of subsiding basins and it remains alone for us to introduce a system of filtration that will make that supply pure and healthful. The people are interested in this question and so soon as it is decided that the City can create a loan the matter should be undertaken with an eye single to the introduction of the best plant or system that can be obtained." In this same message I urged that "provision should be made for the construction of a reservoir to supply the people of West Philadelphia. The administration has ever bent its efforts in the direction of the improvement of the water supply." In my third annual message for the year ending December 31, 1897, I said, "the improvement of the water supply is a crying need. It is a matter that affects the health of every man, woman and child in this community, and should receive immediate attention, for unless something be done to furnish a pure, healthful supply of water, not alone will the

City be affected in so far as its inhabitants are concerned, but the result will be to keep from our midst strangers and visitors who at all times add to the wealth of a community. The fame and reputation of the City depend upon the intelligent settlement of this question. The typhoid fever prevalent here a short time since, brought us all to a realizing sense of the danger that confronts us. If the City had the money in hand a wise solution of the question would be to bring the water from a pure source in large aqueducts to this City, but that would require so vast an expenditure of money that such a plan at present is practically beyond our reach. Fortunately, we have at this time a plentiful supply of water, which no doubt will meet the requirements for many years to come provided we do not draw upon it too extravagantly. The only question to be settled is as to its quality. Inasmuch as we cannot bring our supply from a distance it is a duty incumbent upon us to make pure and healthful by a system of filtration that which we have at hand, and I cannot too strongly nor earnestly appeal to your Honorable Bodies to immediately authorize the creation of a loan, so that an appropriation may be made providing for the construction and maintenance of filtration plants. So soon as the loan is authorized the City will be ready, through her officials having charge of the matter, to submit, as I have already stated in a special message sent to Councils last February, a comprehensive plan looking towards the accomplishment of this object. All that we now need to make our water wholesome is the construction of filtration plants. Subsiding reservoirs go far towards the improvement of the water supply and we have accomplished much in that direction, but we must go a step further. We should unite our efforts to meet this great question intelligently and give relief at the earliest possible moment. Any unnecessary delay is a crime against humanity.

A loan should be authorized and an appropriation should be made, plans should be submitted and contracts immediately awarded for the doing of the work required. The very moment two or three districts are supplied with wholesome water the question will be settled."

After four years of careful study of this matter I have seen no reason to change my mind. This plan I have constantly persistently urged from the very beginning. I believe it will meet every requirement of the case.

My purpose has been clearly defined, the inauguration of the system depended only upon an appropriation and that appropriation could not be made because of the unreasonable and spiteful opposition to the loan bill, an opposition that set at defiance the will of the people, and was dead to every sentiment of civic pride and to all demands of public necessity. If the $3,700,000, provided for in said bill, for the improvement of the water supply had been made available we, to-day, would be on the way towards the solution of the problem and no doubt there would be in course of construction, at two points, at least, natural sand filtration plants as well as a subsiding reservoir in West Philadelphia.

Of course it was never contended for a moment that the amount under the loan bill was sufficient to establish a complete system, but it would have provided enough for a beginning, and with a good start the work would have proceeded to the end.

I sincerely hope the coming administration, for the sake of the City's future, will not be so hampered and that the results of the labors of the friends of the loan bill will be reaped by a successful solution of this all important question. The opinion of the Supreme Court will be handed down in a short time and if in favor of the City nearly $4,000,000 will at once be made available. It has been a long struggle, but it will soon end.

Let me summarize the matter by saying that the City should put her plant in the best condition possible, appropriations should be made to increase the pumping capacity, to build additional subsiding reservoirs, and to construct at those points wherever practicable natural sand filtration beds and at those points where such plants because of the expense cannot be provided, the best mechanical process known. This plan will secure for a generation or more an adequate system and a sufficient supply for all purposes, provided at the same time we adopt a plan that will prevent excessive waste. It will be seen, as above stated, that last year the City supplied 196.2 gallons per capita per day, an increase over the year 1897 of 10.4 gallons per capita per day, and over 1895, the first year of this administration of 35.9 gallons per capita per day. I think it must be apparent to every mind that this increase cannot continue from year to year with an increase, at the same time, in population, without danger of exhausting our supply. A system of metering that will in no wise prevent a necessary and sufficient use, but will provide against excessive and extravagant waste, must sooner or later be adopted, if we are to depend upon our present supply.

The water works of Philadelphia are pumping twice as much water as is required. It is asserted, by those who know, that one-half the water pumped is wasted. If this waste were stopped the capacity of our works would practically be doubled. This excessive demand overtaxes the works, strains them at every point, and prevents the reservoirs answering their purpose, in that there is not given time for the sediment to subside. If the consumption, to-day, were reduced one-half, there still would be an abundant supply, and the quality of the water would at once improve. Time and again we have called public attention to this matter but our requests have been unheeded. In a great measure, the solution of the question

is with the people, and if the waste be stopped, an improvement in the quality of the water will be the immediate result.

With an improved plant and the water made clear and wholesome by filtration the City would be in a position to provide for the distant future. It might under these circumstances be advisable to contract with a company for the furnishing of a supply from the head waters of the Delaware, or as has been suggested in some quarters by impounding the waters or streams in the northern part of the State. Under what terms such an arrangement could be made is hard at this time to state, but in my judgment the City should not negotiate for such a supply, until she is in an independent position, and able to depend upon her own resources, in case of failure on the part of the company to carry out the specifications. Of course, it would be better, if the City could raise the money and provide such a system under her own direction and control, but I think it goes without the chance of contradiction that, at this time, it is not, and so far as we can see into the future, it will not be within her financial ability so to do.

Let me add just here, that the Legislature should enact a law which should be most stringently enforced, providing for the protection of all rivers and streams throughout the State, which supply any community with water. Every settlement upon the banks of these rivers or their branches, should be compelled to filter every drop of sewage discharged into said streams, or else divert the sewage in another direction. The pollution of any stream whose water is drawn upon for public consumption is a crime. Power, clearly defined, should be vested in an executive officer, to enforce obedience to the law; he should be authorized to institute summary proceedings against individuals or communities and the Attorney-General should represent

the State in every action brought. This would go far towards the settlement of the water question. It is the duty and the province of the State, to control this matter and to protect in every way possible, the health of the people by saving from pollution the rivers of the Commonwealth.

Under the Agreement between the City and the United Gas Improvement Company it was provided that "the said The United Gas Improvement Company, its successors and assigns, shall at the expiration of two years from the date of the lease, surrender, release and deliver to the City of Philadelphia full and absolute possession of all that part or portion of the property known as the Ninth Ward Station, described as follows, to wit: All that certain lot or piece of ground with the buildings thereon erected, bounded on the south by Chestnut street, on the east by Twenty-fourth street, on the north by Market street, and on the west by the Schuylkill river; and also all that certain lot or piece of ground with buildings thereon erected, bounded on the south by Market street, on the west by the Schuylkill river, on the north by the Pennsylvania Railroad, and on the east by Twenty-third street."

On March 15, 1899, the President of the said company addressed a letter to me in which he said that "although by Agreement it is provided that the surrender of this property shall take place at the expiration of two years from the date of the lease we are ready to make the transfer immediately or as soon as you designate the person to whom the transfer and delivery of possession shall be made." Having made arrangements for the transfer, the United Gas Improvement Company on the 25th day of March, 1899, surrendered possession of the said property to the City of Philadelphia, and delivered into the hands of the Chief of the Bureau of City Property the keys of

all the buildings thereon. The assessed valuation of this property is $1,200,000. It is now in the possession of the City for any disposition that Councils may deem proper to make of it. On the 30th of March, 1899, I transmitted to Councils a message in relation to the matter.

DEPARTMENT OF CHARITIES AND CORRECTION.

The President and Directors of this Department have given most loyal service to the duties assigned them. It is with regret that I am compelled to refer to the death of Mr. Joseph H. Mann, a Director of this Department, who served faithfully and well the interests committed to his care. He died on Sunday the 8th day of January, 1899. As his successor I named Dr. Joseph S. Neff. On March 24, 1899, Mr. Henry B. Gross resigned as Director of this Department.

Again I urge, in the increased belief for the necessity thereof, the removal of the Almshouse from its present location. Such an institution should be in the suburbs or in the farming districts. The institution would be more healthful and it could be kept in a cleaner condition. From every aspect of the case the necessity of the removal is apparent. In suggesting this removal, I refer to the Almshouse alone, and not to the Philadelphia Hospital, for the latter should remain where it is at present. Both institutions would be greatly benefited by the separation. The new Loan Bill will make an appropriation available for the erection of a new Almshouse.

I have not changed my mind as to the suggestion I have heretofore made in relation to the consolidation of all the poor districts in this County. They should all be under the direct management of the Department of Charities and Correction. The Almshouse is at all times crowded;

its accommodations are not sufficient to meet the constant demands while some of the poor houses in the outlying districts have comparatively but very few inmates. There is no reason why a bill should not be passed in the Legislature providing for such a consolidation. Such a bill was presented in the last Session but failed of passage.

The building of a Free Public Library so soon as funds are at hand should be done. An institution of this character is a necessity; it becomes a centre of education and refining influence. It is false economy to avoid spending money for such a purpose. The Free Library in this City although its quarters are not sufficient for its needs and though it lacks those conveniences that such an institution should enjoy has already made marvelous progress; it shows what could be done with a larger building and increased accommodations. The Boston Free Library has added immensely to the fame and reputation of that City. The same may be said of the Congressional Library in Washington, in fact we hear these two institutions referred to whenever the names of those cities are mentioned. Philadelphia should have such an institution and it is to be hoped that when the money under the Loan Bill becomes available, appropriations will be made for the purchase of ground and the erection of a suitable and artistic building, and that too, as close to the centre of the City as possible.

The following table for the years 1895, 1896 and 1897 speaks for itself; it will be seen that Philadelphia loses nothing in the comparison:

	1895.	1896.	1897.
Boston Public Library.....	847,321	1,005,019	1,119,658
New York Free Circulating.....	654,451	752,329	922,709
Free Library of Philadelphia.....	1,053,745	1,354,002	1,672,684

The reports from Boston and New York for 1898 have not yet been received, but the circulation for that year in

this City was 1,738,950, an increase of 66,266 volumes over the previous year. It, too, must be borne in mind in this connection that the total number of books in our library is only 184,687. If these figures do not prove that a greater library is needed then all argument fails.

Some time since, one of our prominent and public spirited citizens gave to the City his handsome residence on North Broad street to be used as a branch of the Free Library, and besides donated a large sum of money for the purchase of pictures of American artists to adorn the walls of the building. Last year the same generous donor presented to the City a most valuable collection of books printed before the year 1501, consisting of about five hundred works, they are of special value, as illustrating the progress and the early history of printing; the collection contains many choice specimens and is a very valuable acquisition.

If we had a new and larger Free Public Library, it would no doubt induce to further contributions from many of our wealthy citizens who are interested in the welfare and progress of the City.

The Commercial Museum is now firmly established and has brought us in touch with the commercial interests of the whole country, in truth, we may say, of the world. Its influence has perceptibly grown within the past year. Its purposes are better understood and its uses more fully appreciated than ever. It stands as a monument to the energy, the broad and civic spirit of Dr. William Pepper, whose death was an irreparable loss to Philadelphia. The best tribute that can be paid to the memory of so useful a citizen is to continue to successful completion the work inaugurated by him. The usefulness of the Commercial Museum will increase as time runs on, especially in view of the recent war with Spain. Our

accession of territory in the East as well as in the South will open up new markets for our merchants and manufacturers and such an institution has become a necessity. To-day we are entering upon a new future with a broader scope and with greater possibilities in commerce than we have ever enjoyed.

The Commercial Museum, a short time since, inaugurated a movement providing for the holding of a National Exposition in this city in September of this year. It will exhibit the manufactured products of America and give opportunities to our manufacturers to study the character and quality of the goods that hold the markets of the world, in which we are to compete. The work in this direction has already advanced far enough to insure the success of the movement. Congress has made an appropriation of $350,000, the State an appropriation of $50,000, and the City one of $200,000, while private subscriptions are being sought. A bill is now pending in the Legislature of the State providing for an increased appropriation in view of the importance of the undertaking. The success of the Exposition will add greatly to the fame of our City; to-day it is receiving the cordial support of all the business interests of this community and should be encouraged in every direction.

The Civil Service Bureau under the charge and direction of its able Secretary is well organized and the merits of the system have been given a thorough test. The examiners are representative men of integrity; they were selected with care and they have devoted time and attention to the duties assigned them. During the past four years there have been filed 15,000 applications for appointments, and 1,200 examinations have been held.

In my annual message for the year ending December 31,

1897, I wrote the following: "At the time of the destruction by fire of the State Capitol at Harrisburg, I appointed a Committee of Citizens to secure, if possible, the assent of the State authorities to the removal of the Capital from Dauphin to Philadelphia County. Many meetings were held and an effort was made to arouse public sentiment, but unfortunately success was not reached." A resolution of Councils was passed a few days since which was subsequently transmitted to the Legislature urging the removal of the Capital. Before such a removal could be effected the question would have to be, under the Constitution, submitted to a vote of the people and approved by them. Every effort should be made to reach this result. It would be of great advantage to the City, and I believe benefit legislation if such a change could be made. In the matter of convenience and accommodations the City offers every advantage, far beyond that which the present location or any other in the State can afford. So far as railway facilities and communication are concerned the distance is not to be considered. That was a serious matter in the past, but to-day it need not be weighed. The Capitol Building, as has been suggested, might be placed in Fairmount Park, or better than that, in the neighborhood of Washington Square. If our people would interest themselves in this matter they might create a public sentiment throughout the Commonwealth in favor of the removal. It is surely, an effort worth making, and if an act were passed submitting it to a vote of the people a favorable result might be reached.

In the face of the water question and other urgent improvements it may not, in the opinion of some people, be the time to consider the matter of a "boulevard," but I cannot retire from office without saying that it is to be hoped that in the near future, there may be money available to begin

work in that direction. A broad avenue, which, in time, would be lined with handsome buildings, running from the City Hall to Fairmount Park, would make Philadelphia in beauty second to no other city on the continent. It would be wise, for now is the time, if it ever is to be done, to place upon the plan of the City, such an avenue, thus giving notice that the City contemplates making ultimately such an improvement. If, under all the circumstances, it is not deemed advisable to start from City Hall because of the cost, there is another plan that has been suggested, which is feasible and should be adopted.

The defect in our municipal government is in its legislative branch and this is due more to the system than to anything else. When Councils were originally organized the features of the National or Federal Government were copied or followed almost to the very letter. All the wards, whether large or small, were given, in the upper chamber, like representation. There was a reason for the adoption of such a system in the Federal Constitution, because the smaller States would not surrender to the larger their independence as sovereign powers. The question was a matter of compromise as between sovereignties, but in a municipal corporation there is absolutely no reason for the adoption of such a plan, and, in fact, upon every principle of representation it is unfair. The City as a whole, in so far as her interests are concerned, is without representation. Members in the upper chamber, as well as in the lower, consider themselves responsible directly and immediately to their wards, and necessarily their influence is circumscribed by these narrow boundaries. Their loyalty is to a locality rather than to the whole City. They feel themselves answerable to particular constituencies. This quite recently has been shown and has been advanced as a reason by certain Councilmen, who opposed a measure for the gen-

eral good, because to use their own language, they "saw nothing in it for their own wards." This may be a very flimsy excuse, and is not a very broad view to take, but it unquestionably controls the actions of some Councilmen. I believe it would be a decided advantage to the City, and in the interest of wise and proper legislation, if Select Council was reduced in number to 21 or 23 members, to be chosen by the entire vote of the people and elected as the representatives of the whole City—holding an allegiance to the interests of the municipality rather than to any particular district, ward or locality. This would dignify the office and increase its responsibility.

The Common Council should be reduced at least one-third in number, or it would be better to have one Councilman for every 4,000 taxables rather than for every 2,000. The lower chamber would give sufficient representation to the wards and it would be a fair representation based upon population. When we consider that Common Council is composed of 140 members and upwards, we can then appreciate how unwieldy and cumbersome such a body becomes in the conduct of municipal legislation; it is too bulky to be efficient.

I believe, too, it would be proper to pay salaries to the President of the two chambers, and to the Chairman of the Finance Committee, and perhaps to the Chairmen of other important committees. No one not familiar with the duties of Councils can have an idea of the work required from these officials.

There is one very important matter that should receive attention and the time is ripe for its settlement. The legislative and executive functions should be clearly defined. Councils to-day are exercising in many directions and without authority of law executive power. Unless this matter be definitely settled and the distinctions clearly drawn there will ultimately be trouble and confusion.

The purpose of the Act of June 1, 1885, is to centre executive power and responsibliity in the Mayor and Heads of the Departments and whenever Councils attempt to exercise any executive function it is a clear violation of the provisions of the said Act. There should be a full interpretation of the law in relation to this matter and the distinctions clearly drawn before the question becomes further involved.

A number of events of great importance have taken place at different times during the period covered by this administration.

In October, 1895, the Liberty Bell, under a resolution of Councils, was sent to the Atlanta Exposition. The Committee having the Bell in charge traveled through many of the Southern States and the people with enthusiasm and patriotism extended a welcome every step of the way. The Bell seemed, with its associations, to arouse the ardor of the whole people. Men, women and children assembled in all the large cities and towns through which we passed to tender a cordial greeting. The school children covered it with flowers and old men kissed and blessed it. The event has done much to unite in one sentiment the people of this great country. It has unquestionably brought closer together in bonds of friendship the two cities, Atlanta and Philadelphia.

On May 30, 1896, the Garfield monument in Fairmount Park was unveiled. The celebration took place at night and was most imposing.

In September, 1896, Li Hung Chang was the guest of the City, and the reception given him was simple and impressive. It was a strange sight, indeed, witnessed by no other age, when this prominent and distinguished Chinaman sat in Independence Hall and received the welcome of our City.

On May 15, 1897, the Society of the Cincinnati of the State of Pennsylvania unveiled and dedicated the Washington Monument in Fairmount Park. It was a day long to be remembered, for it was most historic in character. The President of the United States and the members of his Cabinet were present to take part in the ceremonies. The weather was all that could be desired and the affair passed off with signal success. It was only another proof of what Philadelphia can do when she rises to meet an occasion.

On the 20th of May, 1897, the statue of Stephen Girard which stands on the west side of the City Hall was unveiled and dedicated.

In June of 1897 an event of national interest took place when the Commercial Museums were opened. The President of the United States and several members of his Cabinet were present.

On June 21, 22 and 23, 1897, the Eighteenth National Saengerfest was held in this City. A large building had been erected for the purpose at Eleventh and York streets, capable of seating 15,000 persons. The grand chorus consisted of between five and six thousand singers; visiting Societies from all over the country were here to compete for prizes. It was one of the most successful festivals ever held in this country.

During the continuance of the war with Spain no City gave more aid to the sick and wounded soldiers who were brought North from the seat of war than Philadelphia.

After the war the returning Philadelphia troops were received and welcomed at the expense of the City. The receptions were of such a character that they proved the real loyalty and patriotism of our people.

On October 25, 26, 27 and 28, 1898, a Peace Jubilee was held in this City in commemoration of the return of Peace as well as in celebration of the triumph of our arms on land and sea in the war with Spain.

On the first day there was a Naval Review on the Delaware, and Hon. John D. Long, Secretary of the Navy, was present upon that occasion; the battleships and cruisers were anchored in the river. The second day was Military Day and 25,000 soldiers and sailors under command of General Miles, marched in review before the President of the United States and the members of his Cabinet. The third day it rained and the Civic procession in consequence was postponed until the following day. The Jubilee passed off with great success; the City was crowded with strangers; such an event has never been witnessed in this City. The President and his Cabinet, the Generals of the Army, the Commodores and Captains of the Navy, were guests of the City during the continuance of the festivities. It was the most successful event of its character in this country since the war with Spain.

In December last, at the Peace Jubilee held in Atlanta, Georgia, the President of the United States gave utterance to the following: "The time has now come in the evolution of sentiment and feeling under the providence of God, when in the spirit of fraternity we should share with you in the care of the graves of the Confederate Soldiers." No more patriotic expression has been uttered since the Civil War. The Confederate Veterans Annual Convention is to be held this year in Charleston, S. C. The Grand Army of the Republic is to have a National Convention here this year. Would it not be a great opportunity for Philadelphia to extend an invitation to the Confederate Veterans to meet here in 1900? An invitation of the City endorsed at the next Convention of the Grand Army of the Republic could not but result in great benefit and a further cementing in sentiment of the whole nation.

In conclusion let me express my appreciation of the

loyal support given to me at all times by the heads of the several Departments, the Chiefs of the various Bureaus, as well as their subordinates, and the Secretary and assistants of my immediate official staff. I shall ever bear in grateful remembrance the devotion and aid I received from my friends in and out of Councils who in the face of violent opposition were ever loyal. I am sure that time will prove that our efforts were always devoted to the public welfare, and to the interests and advancement of the municipality.

Yours very truly,

CHAS. F. WARWICK,
Mayor.

ANNUAL REPORT

OF THE

Department of Public Safety

FOR THE

YEAR ENDING DECEMBER 31, 1898.

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OFFICERS

OF THE

Department of Public Safety,

December 31, 1898.

Director,

FRANK M. RITER.

SECRETARY—JAMES HOYT.

BOOKKEEPER—HIRAM HORTER JR.

Chiefs of Bureaus:

POLICE—ROBERT J. LINDEN, Superintendent.
FIRE—JAMES C. BAXTER, JR., Chief Engineer.
ELECTRICAL—DAVID R. WALKER.
CITY PROPERTY—A. S. EISENHOWER.
BUILDING INSPECTION—WILLIAM C. HADDOCK.
BOILER INSPECTION—JOHN OVERN.

MEMBERS OF BOARD OF HEALTH,

ANTHONY A. HIRST, President pro-tem,
ALBERT C. DINGEE,
COL. J. LEWIS GOOD, Secretary,
JAMES WALK, M. D.
GEORGE WOODWARD, M. D.
FRANK M. RITER, President ex-officio.
JOHN J. McCAY, Chief Clerk.

TWELFTH ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC SAFETY.

FRANK M. RITER, Director.

Philadelphia, February 1, 1899.

HON. CHARLES F. WARWICK,
Mayor of Philadelphia.

DEAR SIR:—In accordance with the Act of Assembly I herewith transmit a summary of the operations of the Department of Public Safety, together with the reports of the Chiefs of the several Bureaus embraced therein, for the year ending December 31, 1898.

Bureau of Police.

The total number of arrests for all offences was 62,907, an increase of 275 over last year. Arrests for intoxication and intoxication and disorderly conduct were 27,543, an increase of 2,369 over last year. The total number of lodgers accommodated were 56,461, a decrease of 8,152 as compared with last year. The total value of property recovered by the Bureau was $166,462.95 as compared with $139,863.94 for the year 1897. $59,014.43 were recovered by the Detective Force. During the year there was but one addition to the force, that of Lieutenant of the Thirty-second Police District, which district was established by the division of the Twenty-first District. The new district includes the new Fortieth Ward. The

station house is at Sixty-fifth street and Woodland avenue, formerly the sub-station of the Twenty-first District. The force of this new district (except the Lieutenant) was made up by transfers from the Twenty-first District.

No new patrol stations were created during the year, but the advisability of each district and each sub-district having its own patrol wagon cannot be too strongly urged; for it often occurs that much valuable time is lost in waiting for the wagon of an adjoining district which in many instances is kept busy in its own district and cannot respond immediately to outside calls. There are forty-one stations and sub-stations, twenty-three of which have patrol wagons. The mounted force which is now designated as "Troops A, B and C," composed of 152 officers and men has reached a high degree of discipline and efficiency.

The improvements being made along the Delaware river front by the extension of piers, etc., requires that the city should have two new police boats to take the place of Boats Nos. 1 and 2 as the former boat draws too much water and consequently cannot enter some of the docks at low tide. Boat No. 2 is too small and is without cell accommodations. In considering the construction of new police boats it would be well to have them built on more modern lines with more beam and less draft. On August 15th boat No. 1 was ordered to be thereafter stationed at Penn Treaty Park wharf instead of Vine street wharf. This change was deemed prudent as a protection to the vast shipping interests near the former locality. Special details of police were made during the recent war, at the shipyards, engaged in the construction of boats for the Navy.

As there was no apparent increase in the number of bicycle riders in the City during the year it was not deemed necessary to increase the force of bicycle policemen.

There were 10,723 dwelling houses temporarily vacated

during the summer months and under the care of the police, a decrease of 996 as compared with last year. Twenty-seven of these houses, seven less than last year, were robbed of goods valued at $3,874, of which $2,016 were recovered. Nine thieves were arrested; one being sentenced to six years, two to three years each, one to two years, one to eighteen months in the House of Correction, and several are awaiting trial.

There were thirty deaths in the Bureau of Police during the past year: one street sergeant, James M. Boyd; one house sergeant, Alexander McKeown, and 28 patrolmen.

The report of the Captain of Detectives shows the amount of work accomplished by that branch of the service during the past year and notwithstanding the limited force of detectives for such a large and growing city it is very creditable and shows the necessity of an increase in its membership.

Under the guidance of City Councils the first train of sick soldiers of the late war was brought into this City on the night of August 21st, carrying with it 101 patients. Between this date and September 27th there were received in this City, by train, 1,112, and by boat, 463 patients, making a total of 1,575. The entire charge of the reception, handling and disposition of these soldiers was in the hands of the City of Philadelphia between these dates and was carried on most satisfactorily. The manner in which it was done evoked generous comment on the part of regular army officers and others. After September 27th, Major D. C. Peyton, Surgeon United States Volunteers, was appointed by the Secretatry of War to receive and direct the assigning of sick soldiers to the hospitals in the City of Philadelphia. The entire organization of the Department was placed at Major Peyton's command and he used it throughout his entire work. In addition to the

Government and Red Cross vessels used in the transportation of soldiers the fact must be borne in mind that Commodore Van Rensselear used his yacht "May" for the purpose of transporting provisions to Porto Rico and for bringing back the sick, illustrating the ever present generous impulses of one of Philadelphia's best citizens, and also refined gentlewomen of Philadelphia volunteered and served as nurses of the soldiers in the hospitals and in the camps. All their names should be obtained, and it is suggested that a resolution be recommended to Councils recording their self-sacrificing and patriotic services. All hospitals responded at all times to the request of the City for the use of their ambulances and there is appended among the reports of this Bureau a short report by Mr. Mintzer of this office of the details of this work.

Poll selling on horse racing is not carried on in Philadelphia. On August 31st a very successful descent was made on a number of places and the principals and backers arrested and their outfits captured. The cases have been returned to Court awaiting trial.

A reference to the records discloses the fact that during the year 1898 the following arrests were made:

For the illegal sale of liquor 163 persons were arrested upon whom 413 bills of indictment were found. For the keeping of bawdy houses 124 persons were arrested and 124 bills were found. For the keeping of pool rooms 19 persons were arrested and 10 bills of indictment were found. For soliciting upon the streets 618 persons were arrested, most of whom were sent to the House of Correction for various periods under one year.

Your attention is called to the need of additional clerical force in this Bureau, especiallv a stenographer and typewriter to assist the Police Court, which at the present time requires almost the undivided attention of the assistant clerk. The force of the Bureau and the work incident

thereto has almost doubled since 1887, and although eleven years have elapsed the force of clerks remains the same. There are two clerks.

During the year 338 cases were tried by the Police Court, an increase of 44 over 1897, and an increase of 55 over 1896. These cases involved 373 officers of various ranks, as follows: four street sergeants, seven house sergeans, three patrol sergeants, one patrol driver, one patrol officer, three harbor pilots, one harbor engineer, one harbor officer, one hostler, 298 patrolmen and 53 substitute patrolmen, an increase of 27 over last year. Of the above, 316 were found guilty and 55 were acquitted. The fines imposed by day's pay were $887, an increase of $147 over last year, and in five cases officers were reprimanded or sentence was suspended. One street sergeant and one house sergeant were reduced to the ranks, and one patrolman was reduced to substitute. The following were discharged: One house sergeant, two patrol sergeants, 74 patrolmen, 26 substitute patrolmen, a total of 103, and an increase of 12 over last year. Over 25 per cent of the entire force of substitute patrolmen was on trial during the year and less than 7 per cent. of the regular patrolmen.

The efficiency and morale of the police force are steadily increasing.

Work of Patrol Wagons.

Miles travelled	146,710
Sick and injured taken to hospitals	9,339
Sick and injured taken home	1,267
Prisoners taken to station houses	34,690
Prisoners taken to Central Station	3,995
Prisoners taken to County Prison	1,027
Lost children found	2,006
Lost aged persons found	151
Dead bodies found	138
Abandoned infants found	76

Fire Marshal.

The total number of fires was 2,484, being 57 more than last year, while the loss on buildings and contents was $1,653,902, being a decrease from the previous year of $1,026,768. A number of persons have been arrested upon evidence pointing to their connection with incendiary fires. The details relative to this branch of the work may be had by reference to the report of the Fire Marshal.

Meat Inspection.

The detail report of this branch of the service will be found with the other reports. It will repay a careful study. A brief synopsis discloses the fact that in 1898 there were inspected 135,843 head of cattle, of which number 233 were condemned. Two hundred and nineteen of these suffered from tuberculosis, two from actino mycosis and nine from other causes. There were visited during this period 5,192 slaughter houses and all the market houses were visited twice a week.

There were 53,505 calves inspected and of this number 2,005 were condemned as unwholesome and their sale prevented. All condemned cattle were destroyed.

There were 14 arrests during the year for selling unwholesome meat.

The untiring energy of Mr. Lowry in this exceedingly difficult work cannot be passed without special commendation. The disease preventive value of this work is of the utmost importance and the number of inspectors should be increased.

Bureau of Fire.

A full statement of the operations of the Fire Bureau will be found in the accompanying report of Chief Baxter. The skill and courage of the members of the Bureau of Fire is of the very highest order.

The entire amount of money appropriated for this year for the purchase of new apparatus was $10,000. There were three companies who bid for the supply of fire engines, all of which were of the piston type and at the same price. Upon being communicated with they would not submit their engines to competition. The Department has concluded therefore to select one of the piston engines of the Extra No. 1 size and order it as soon as possible. An increase in the number of fire companies protecting portions of the City that are remote from any located company and also the increase of engine and truck companies in the portions of the City devoted to manufacturing and commercial purposes where the buildings are of unusual dimensions is strongly urged. For the protection of the exceedingly high buildings that have been and will likely be erected a greater supply of water is required. Large mains should be laid from the Delaware river to Broad street on Market, Chestnut and Arch streets, with a pumping station at the Delaware river for the purpose of giving direct pumpage of great force and volume in case of fire; and a similar line of mains be laid to run from the Schuylkill eastward to Broad street, on the same streets with a pumping station on the Schuylkill. Numerous plugs could then be placed connecting with these mains which would throw a very great stream of water even without the employment of the steam fire engines. By the employment of a proper series of wires the entire pressure at the pumping station could be put upon any one of these streets or divided as required. This is strongly recommended by the Chief of the Fire Bureau, Mr. James C. Baxter, Jr.

There were 300 firemen injured in the performance of their duty, their injuries being more or less serious. There were seven deaths in the Bureau, two of which occurred while the men were performing their duty. The courage

and discipline of the force speak for themselves and need no comment. There are 83 persons deriving benefits from the Firemen's Pension Fund. They are divided as follows:

One assistant engineer, seven foremen, one assistant foreman, two enginemen, twenty-eight hose and laddermen, fifteen widows, twenty-seven children, two dependent children. The total sum paid to these beneficiaries during the year 1898 was $23,288.91.

There were erected 204 fire escapes during the year 1898.

Bureau of Building Inspection.

Too much attention cannot be given to the report of Mr. William C. Haddock, Chief of this Bureau. The Bureau itself under his charge has developed into scientific accuracy and its operations are systematically carried on and in the most business-like manner. The following table indicates the work done during the past year:

STATEMENT OF PERMITS, OPERATIONS AND ESTIMATED COST, BY WARDS, FOR THE YEAR 1898.

Ward.	Permits.	Oper'ns.	Est. Cost.
1	166	212	$157,670
2	134	144	84,605
3	77	83	44,105
4	106	118	48,860
5	130	134	278,785
6	204	206	468,635
7	163	168	410,800
8	304	311	1,737,530
9	237	339	818,595
10	219	226	804,720
11	74	86	175,980
12	52	56	47,290
13	58	58	45,135
14	120	123	202,230
15	247	287	293,265
17	66	72	52,750
18	122	173	104,770
19	278	312	348,350

Ward.	Permits.	Oper'ns.	Est. Cost.
20	224	239	208,280
21	218	264	280,975
22	716	1063	1,737,470
23	262	326	324,665
24	304	446	752,965
25	271	371	511,465
26	195	384	592,645
27	283	672	1,836,180
28	247	341	1,267,810
29	284	342	425,190
30	146	181	57,375
31	149	168	81,400
32	198	352	558,630
33	404	882	1,222,505
34	334	1342	2,884,855
35	399	498	398,350
36	146	308	607,960
37	100	145	96,165
38	228	465	743,500
39	135	333	256,000
40	166	494	785,705
	8237	13,197	$21,865,555

This shows a decrease of 75 permits, a decrease of 1,740 operations and a decrease in the estimated cost of $4,050,-215 from 1897. The total appropriations to this Bureau were $49,320, and the total receipts were $35,100.90. Should the charges made by this Bureau be judiciously rearranged there would be no difficulty at all in making the Bureau self supporting.

The total number of visits made by the Inspectors was 50,230. There were issued during the year 696 condemnations embracing 975 buildings. Attention is called to the existing force of Elevator Inspectors as required by the ordinance of April 10, 1894. As yet no action has been taken by Councils to enable the Department to carry out the provisions of the ordinance and at least 21 additional inspectors and an increased clerical force will be required together with a Chief Inspector, who should be a scientifi-

cally trained engineer. The ordinance above referred to requires that every elevator should be inspected by the Bureau of Building Inspection at least once every three months. It will be recognized how impossible this is when it is recalled that there are about 10,000 elevators in Philadelphia and but three elevator inspectors.

An Act of Assembly has been introduced amending the existing building laws which if enacted will eliminate some of the uncertainties existing in the present legislation. It is observed that it would be well if legislation were enacted limiting the height of buildings in accordance with the Act of Assembly which was introduced at the last session of the Legislature which fixed a maximum height of 150 feet and prohibits at any time the erection of a building which shall exceed in height three times one-half of the width of the street upon which it fronts. The existing laws should also be amended so as to prevent the erection of open elevator shafts. These elevator shafts should be enclosed with non-combustible material. The shafts are frequently the cause of the rapid spread of fire and are a serious menace to life and property.

Bureau of Boiler Inspection.

The total number of boilers inspected and approved by the Bureau during the year 1898 was 2,946. The number of locomotives sold to Russia and Japan inspected by the Bureau and approved was 143, making a total of 3,089 boilers inspected and approved.

The total earnings of the Bureau for the past year were $22,164.08. The total appropriations to the Bureau were $15,900.

Bureau of City Property.

This Bureau has charge of the maintenance and repair of all property occupied by the Department of Public Safety.

The public bath houses were opened on June 20 and closed October 2, and 3,347,048 bathers were accommodated during that period. Four hundred and seventy-eight bodies were received at the morgue and 208 interred in the City Burial Ground. Twenty bodies were cremated.

Four lots for fire houses, two lots for bath houses and one lot for a police station were purchased during the year.

The new fire house at the corner of Second street and Drinkers alley has just been completed at a cost of $13,490.

The work of enlarging police station houses is going on so as to avoid the necessity of two men occupying the same bed, one immediately after the other. This is accomplished by putting additional stories upon the station houses.

During the summer months the Municipal Band gave ninety concerts in twenty-four squares throughout the City and attracted large audiences.

The City Forester has directed the work of the care and maintenance of the squares under the charge of this Bureau. New trees have been planted and sodding and flower beds have received attention and the display of bulbs in the early Spring has been most successful.

The work of developing League Island Park presents unusual opportunity for developing that section of the City. To that end plans have been submitted in competition before a committee consisting of Charles W. Henry, Esq., Justus C. Strawbridge, Esq., W. W. Frazier, Esq., Walter Cope, Esq., and George S. Webster, Esq. The importance of this work cannot be overestimated, as upon its success will largely depend the attractiveness of a great pleasure ground and the future development of the section of the city bordering on it. The work of the committee has been carried on most satisfactorily and every recommendation carried out. The successful competitors will be announced shortly.

The work of the restoration of Independence Hall has been continued with care and intelligence. The Philadelphia Chapter of the American Institute of Architects appointed a Committee consisting of Frank Miles Day, Esq., Walter Cope, Esq., and Edgar V. Seeler, Esq., who by consultation, labor and advice have successfully aided in preserving the integrity of the original construction of these historic buildings.

The work of the restoration of Independence Hall is practically completed. Contracts have already been awarded which will place the two clocks, one on the west and one on the east end of the main building and other details are provided for. The work as performed under the patriotic impulses of the Philadelphia Chapter of the Daughters of the American Revolution has been carried out most successfully with a single exception. Their work contemplated the restoration of the second story of Independence Hall. The Committee and the officials having the matter in charge were more engrossed in strengthening the building where it had been weakened and in the correct historical division of the floor space than in the mere detail of the wood work. In the first two they have been unqualifiedly successful. In the woodwork mistakes of style have been made. The architect in charge at the time acquiesces in the fact that the woodwork should be changed and also approves of the new plans which have been prepared under the direction of the above referred to Committee of the Philadelphia Chapter of the American Institute of Architects. It is not a matter that the public would have noticed or criticised and they would have thought it all correct as it is, but a full appreciation of the responsibilitiy of the work to be done precludes any other course than that now followed; that is, to make it right when the subject is under observation and discussion with those having special knowledge of all details.

The plans for this change have been prepared by the above Committee. It is hoped that in a few days the appropriation providing for this correction will have been made.

The continual decrease of rents from market stalls again suggests the importance of removing this unproductive property and clearing the streets of the dilapidated structures. The widening of Delaware avenue and the river front improvements should bring additional revenue from wharf property. In the near future Councils should be requested to take up the question of leasing the City wharves and devise some means for the accommodation of vessels sailing from this port without definite arrangements for wharfage or facilities for discharging cargo.

The work of this Bureau is difficult in the extreme and is thoroughly mastered by Mr. A. S. Eisenhower, Chief of the Bureau of City Property.

Electrical Bureau.

This Bureau, under the management of Chief David R. Walker, continues to rank as the first of its kind in this country. His report is specially called to the attention of everyone as being instructive in every branch of the subject covered by it.

The policy of extending the underground system has been pursued with the most gratifying result and its value fully demonstrated. When storms render the overhead service useless the underground service is unimpaired. The fire signal service, the police signal service and the telephone system should all be placed underground as they are an important element in the preservation of the peace and the security of property, and Chief Walker's recommendation that a liberal appropriation should be made for the extension of this work throughout all sections of the City is concurred in.

The number of calls over the police signal and telephone service during the year were 5,207,553; of this number 5,155,288 were telephone calls, 47,226 reports from private institutions, and 52,265 wagon calls. The wagon calls were distributed as follows:

Conveyance of prisoners	32,682
Conveyance of injured persons	8,825
Conveyance of officers to and from fires	1,203
Miscellaneous work	9,555

Some estimate of the operations of this Bureau can be obtained from the above figures.

The revenue paid in to the City Treasury for the rental of ducts in the City conduits amounted to $8,913.88.

During the year frequent and exhaustive tests for electrolysis were made on the cables under the care of this Bureau and sub-structures belonging to the City by an Inspector of this Bureau and where a faulty or positive condition existed the railway company was at once notified and they remedied the trouble by either bonding to the trolley return lead or by laying larger return cables.

The Union Traction Company has taken down over 11 miles of overhead wire and 214 poles.

At the close of the year there were 7,147 electric lamps located in the public highways, making Philadelphia most undoubtedly the best lighted city in the world. There were 11,347 lamps deducted from the bills of the various companies during the year aggregating $3,700.25. The price of electric lighting for the year 1899 has been reduced to an average price of about 31.84 cents per lamp per night, a saving of $18,491.76 over the year 1898. The following table will show the average price of electric arc lighting and its decrease from 1895 until the present time.

Average price per lamp per night:

1895	41.15
1896	35.5
1897	33.3
1898	32.5
1899	31.84

In pursuance of a resolution of Common Council, under date of September 16, 1898, the Chief of the Electrical Bureau made an estimate of the cost of establishing a municipal electric light plant of 2,000 capacity. This plant was to be located in that part of the City where the largest underground mileage existed. It was consequently estimated on the basis of the territory between Poplar and South streets and the Delaware and Schuylkill rivers. The estimated cost of establishing this plant was $1,037,627.

The total number of police patrol boxes now in use by the Department under the supervision of this Bureau is 580 for police purposes and 17 in use by private parties, from which the City derives a revenue.

The Bureau has taken down and removed from the streets 119 poles and 160 1-3 miles of telegraph and telephone wire belonging to the City and 57.71 miles of foreign wire. This was made possible by the extension of the underground system.

There were 937,964 telephone calls and connections made, and 33,562 messages received and transmitted over the telephone switchboard.

The various telephone, telegraph and electric light companies paid into the City Treasury $44,686.50 as license charges on poles, wires, etc. The total revenue from all sources was $55,931.33.

Bureau of Health.

The health of the City during the year was good. The death rate was 19.18 per thousand, which although slightly higher than 1897 is lower than any year since 1879.

Diphtheria caused 1,154 deaths, which is 320 less than in 1897. There were 4,415 cases reported, a decrease of 990 over the previous year. The death rate from this disease was 26.14, a decrease of 1.14 over 1897.

There were seven cases of small-pox reported during the year which were the first cases to occur in this City since October, 1895. All were sent to and treated at the Municipal Hospital and they all recovered. Two cases presented themselves in the early Spring. The first was a man who worked in a cotton mill in the northern section of the City. From investigation it is believed that he was infected from cotton which came from the Southern States where small-pox has been constantly present for the past two or three years. This case infected his brother, who roomed with him. All the cotton in the factory was thoroughly disinfected and all the employees vaccinated. The remaining five cases were discovered in the southern section of the City in November. These cases had their origin in Norfolk, Va., in the vicinity of which small-pox was quite prevalent. The man who brought the disease infected four other persons in the house. These patients had to be removed to the Municipal Hospital in a blinding snow storm. The only accommodation which could be given to them at that time was in tents. The possibility of small-pox was recognized long in advance of the cases in November. Sporadic cases presented themselves in different parts of the State. There were no unused buildings, so hospital tents were provided and the patients accommodated. When the probability of a number of cases presented itself and the inadequacy of the accommodations

were made fully known to Dr. George Woodward, a member of the Board of Health, he purchased a small piece of ground immediately south of the present Municipal Hospital upon which was erected an old infrequently used church. This he tendered to the City for emergency and subsequently, with a thoughtful generosity remarkable in every way tendered the entire lot as a gift to the City, thus at private expense supplying a public need.

There were 6,047 cases of typhoid fever reported which was an increase of 4,103 over 1897. The deaths from this disease were 639, an increase of 238 over the previous year. Of the 639 deaths from typhoid fever 73 were soldiers, who contracted the disease in camp and were brought to this City for treatment. Reference to the report of 1897 will show that typhoid fever greatly increased in December of that year, there being reported in that month 485 cases which was an increase of 260 cases over November, in which month the disease appeared to be about normal. The average monthly number of cases reported in 1897, exclusive of December, was 228. The increase of the disease continued during the first three months of 1898, during which time 1,892 cases were reported. This increase of typhoid fever was attributed to an overflush of the intercepting sewer in November, 1897, in consequence of which sewage was discharged into the Schuylkill river near the in-take of the Queen Lane Pumping Station.

Of the total number of cases of typhoid fever reported in the present year, 1,346 cases were of soldiers who were brought to this city from military camps throughout the country and treated at our various hospitals. Among such cases 73 were reported. It is quite likely that other "soldiers" cases than those reported by the hospitals were treated in Philadelphia, but the number of such we have no means of ascertaining. The direct causes of the great

increase of typhoid fever may be attributed to the overflow of the intercepting sewer above referred to, in the latter part of 1897; cases brought to the City from various camps numbering 1,348 and such other cases as were the direct or indirect result of the Spanish-American War.

There were 1,900 cases of scarlet fever reported, of these 114 died, showing a decrease of 168 in the number of deaths as compared with last year.

Pneumonia caused 2,480 deaths, a decrease of 243 from 1897. Consumption caused 2,590 deaths, an increase of 202 over 1897.

The deaths of children under five years of age numbered 7,998, which is .63 of the population or 33.66 per cent of the mortality of all periods of life and from all causes.

The total number of deaths from all causes was 22,190 or 65 a day, which is an increase of 1,055 over the previous year. The death rate from all causes based upon a population of 1,240,666 was 19.18 per thousand or one death to every 53.40 persons living.

The total number of births reported during the year amounted to 29,969, which was an increase of 54 per cent. over the previous year, and is equivalent to 24.16 per thousand or at the rate of one birth to each 41.28 persons living.

The number of marriages reported during the year was 8,644, or 17,288 persons married. The marriage rate per thousand for the year was 13.93 per thousand, or one person married in each 69.69 of the population.

It is a matter of interest to know that there were 130 deaths from heart disease, 129 people were killed by the steam railroads, 74 persons from sunstroke, 53 persons were drowned, 32 were killed (homicide), 26 persons were killed by the trolley cars, 5 persons were killed on the Subway, and two persons died from exposure and neglect.

There were 17,970 complaints of nuisances received.

Nine hundred and thirty were abated without formal notice, 12,280 were abated by the property owners under compulsion, and 2,351 were returned not complied with and could not be abated by the Bureau of Health because its appropriation was exhausted in September.

Inspections were made of slaughter houses, cemetery vaults, lodging houses, etc., and it is recommended that abattoirs be established and legislation asked for to compel the slaughtering of all cattle in them, under the proper sanitary regulations. This would do away with a large number of slaughter houses in different sections of the City and at the same time concentrate the powers of inspection.

The public schools were all inspected during the year by the Medical Inspector and his assistants.

There were 5,941 house drainage plans for new buildings, and 6,885 for old buildings approved during the year. Applications for registration as master plumbers were received from 149 persons, and of these 132 were examined and 73 accepted as competent. The number of persons authorized to carry on the plumbing business up to December 31, 1898, was 961.

The number of quarts of milk inspected during the year was 468,309. Of this quantity 5,710 quarts or 1.21 per cent were condemned for the adulteration with water, and 2,680 quarts were skimmed milk. The monthly average condemnation is shown to be 1.78 per cent of the quantity inspected. There were 39 prosecutions during the year. Seventeen defendants pleaded guilty; two were convicted, and two were discharged by the Magistrate who warned them to be careful in the future.

The Division of Chemical Analysis was engaged throughout the year examining samples of milk and water. The report of the Chemist as well as the Special Assistant employed to make systematic examinations of the water supply will be found in the report of the Bureau.

There were 1,797 cases admitted to the Municipal Hospital, which is 382 less than the number admitted in 1897. Of the admitted cases 1,229 were diphtheria and 380 scarlet fever.

The Division of Disinfection received during the year 6,330 orders, many of which involved the disinfection of large buildings, such as school houses, factories, armories, etc. The average number of rooms covered by the greater part of the orders was two. Three diseases occasioned disinfection in all but 173 cases. These were diphtheria, scarlet fever and consumption. As a result of the co-operation of the Division of Bacteriology and Disinfection in a series of experiments testing the virtue of various disinfecting agents formaldyhide gas as generated by special apparatus is regarded as much preferable to the present methods of sulphur fumes and formaldyhide spray and has been adopted by the Department as the correct method of disinfection for all cases excepting the immediate bedding, which should be subjected to the steam disinfection.

The importance of this work has never heretofore been fully realized. The growth and extent of the City makes it imperative for the proper performance of this work that at least six disinfecting stations be established at proper places throughout the City so that all bedding, etc., may be easily subjected to the live steam process which at 220° destroys all germs of disease. These are inexpensive, take up but little room, have no danger in themselves, and yet tend to make the work of the Bureau of Health more efficient.

The Bacteriological Laboratory of the Bureau examined 5,536 cultures from suspicious inflammations of the throat. Of this number 2,998 were primary and 2,538 were secondary. Of the primary cultures 1,732 revealed the presence of diphtheria bacilli and 1,091 did not contain the bacilli

and 1,705 were in such an unsatisfactory condition on reaching the laboratory that a positive opinion was impossible. During the year 3,367 bottles of diphtheria anti-toxin were supplied to the Municipal Hospital and to physicians.

During the year there were 17,323 successful vaccinations performed.

A repetition of the report of last year is made as still applying to existing conditions:

"No more serious question is presented for municipal consideration than the one involved both in the permanency and extension of the Municipal Hospital. That it has been deprived of its natural and legitimate assistance by reason of the uninterrupted agitation seeking its removal from its present location cannot be doubted. Existing prejudice would naturally develop opposition and seek to prevent the adoption of any new site for a Municipal Hospital. It is deemed a matter of great importance that the question of the location of a Municipal Hospital should be eliminated from all consideration and the present location considered a finality. There is ample room in the immediate vicinity for the indefinite extension of the service to be rendered by the Municipal Hospital. It is important that the accommodation should be ample and that the City should have the use and advantage of modern appliances. The possibility of having cases of small-pox taken to the hospital is unfortunate. It gives the place the horrible character of a pest house. The objection arising from the possibility of treating small-pox at this place should be entirely eliminated by the purchase upon the outskirts of the City of a small piece of land of four or five acres in which, should cases of small-pox arise, or an epidemic of the disease appear, the patient could be taken at once. A very inexpensive pavilion could be erected and the place be kept in readiness for use

at any time. This would leave the Municipal Hospital free to deal with cases which do not create in the mind of the public a high degree of apprehension."

The development and growth of the Commonwealth as exhibited in our cities has temporarily changed conditions heretofore existing. The isolation of a community and its control over its own acts has been regarded as an inestimable privilege. The growth of our municipality has developed it into a menace. No longer should it be possible for a city to have its source of water supply menaced by another or the other to menace the former by the distribution of its sewage, both depending alike upon the accident of location. The question of both water and sewage from a health standpoint must be taken and considered together. To do this effectively it is suggested that the State should be divided into sections comprising its great valleys and watersheds, having over each territory so indicated, a board with plenary power to take land and to preserve secure the source of supply of water; and to control municipalities in the methods of distribution of their sewage. This power might be vested in the State Board of Health, with appropriate legislation enlarging its powers. The total inefficiency from any view of municipal government which permits a city or town to provide for its own sewage without regarding the existence and health of those who live between it and the mouth of the stream which it utilizes in this respect cannot be urged too strongly.

The health of the City depends largely upon an ample supply of pure water. With this in view I make the following observations. The question affecting the water supply for Philadelphia is neither difficult nor so expensive as has been supposed Sufficient supply can be secured in a natural basin between Fairmount Dam and Manayunk by dredging the river between these points to

its original depth. The dam at Fairmount was completed in 1822, and the bottom of the river has been rising ever since. Some recent dredging has been done but not with the view or result of increasing the diminishing capacity of this natural reservoir. For seventy-seven years the alluvium brought from the entire length of the stream has found a chance to deposit itself in this basin. The result of this is easily seen in summer, above Girard avenue bridge when the grass and bottom of the stream push themselves above the surface of the water. This condition of affairs can easily be overcome by dredging and the supply made ample as it has the entire valley of the Schuylkill back of it. Care should be taken to not permit the filling of the dam between Manayunk and Shawmont. With the supply of water thus provided for it is suggested that it is easily practicable to filter by mechanical process all the water entering the forebays and that these forebays be enlarged to the extent of really being great sunken reservoirs. The cost will manifestly be very much less than that of any process contemplated and the distributing reservoirs now in existence could be kept constantly filled with clear pure water. This of course would apply to the reservoir now supplied from the Delaware river and all this work could be proceeded with simultaneously.

It is with unfeigned happiness that I am able to officially report that no man in this Department has been deprived of his place but for cause justifying his removal. In thus carrying out not only the letter but the spirit of the law no man has been embittered against the law. Every employee has been enabled to perform the duties of his place with the full consciousness that neither chicanery nor malice would play any part to deprive him of it and his livelihood has thus been made safe from political strife so long as he performed the duties incident to his position. No man has lost his place because he

either would not or could not perform a political act. The result of this has been that the work of the Department has moved more smoothly and efficiently and the personnel has advanced in discipline and character and the public better served.

Special Recommendations.

1. An increase in the police force of this City as suggested, especially of mounted men in the suburban districts.

2. An increase in the fire force as essential to the proper protection of property in certain sections of the City.

3. The appointment of an executive officer to the Board of Health, but not its abolishment.

4. The passage of an ordinance of Councils regulating the fees of the Bureau of Building Inspection for building permits and inspection of plans.

5. The thorough and complete electric lighting of the City from a police standpoint.

6. The appointment of a committee to consider the older part of the City for the purpose of ascertaining those streets which are not public highways, and having them under the Act of Assembly placed upon the City plan as such, so that they may be properly supplied with water, sewers and light.

7. The laying of water mains for fire purposes on Chestnut, Market and Arch streets with permanent pumping stations on the Delaware and Schuylkill rivers.

8. The appointment of Elevator Inspectors and the adoption of some rule which would compel all buildings to use some system which would tend to prevent injury arising from defective elevator machinery.

9. The vesting by the State, in an appropriate body, of the power to preserve the source of water supply, and control the distribution of sewage of municipalities.

10. The passage of an ordinance prohibiting the obstruction of aisles in the great retail stores.

I desire to express to you my sense of deep obligation.

I remain, with respect,

Yours truly,

FRANK M. RITER,

Director.

ANNUAL REPORT

OF THE

ELECTRICAL BUREAU

FOR THE

Year Ending December 31, 1898.

ANNUAL REPORT

OF THE

ELECTRICAL BUREAU

FOR THE YEAR 1898.

Philadelphia, January 31, 1899.

FRANK M. RITER, ESQ.,
Director, Dept. of Public Safety.

DEAR SIR:—Submitted herewith will be found a digest of the operations of the Electrical Bureau for the year 1898, enumerating the improvements to, and the extensions and maintenance of, the numerous electrical services under its care.

The report thus embodied constitutes my fifteenth as Chief, and of the Bureau, the forty-third.

Electricity enters so deeply into the busy life of a large city, that its officers and citizens, when restricted in the use of the various forms of apparatus to which it is applied for municipal purposes, demand that a more liberal provision be made for its extension, while the officials having these matters in charge, are constantly besieged for numerous additions to the existing services.

The legislative branch of a number of larger cities, recognizing the necessity for enlarging and extending the benefits to be derived from this form of apparatus, have met the demand by appropriations fitting their several needs.

In this City, universally recognized as a City of Homes, there are many thousands of properties erected each year, causing its built-up boundaries to expand to such an extent, that the means furnished us to provide electrical apparatus for their protection cannot keep pace with the requirements, and unless a more liberal view of the matter be taken, by our Councils, it will be many years before we will be able to meet the demands made upon us.

Consistent with our purpose to at every opportunity urge the appropriation of moneys sufficient to place the ever increasing and important services under the care of this Bureau in the front rank of municipal electrical affairs, I will again point to the necessity for largely increasing the facilities offered by the fire signal, the police signal and telephone systems, and the underground system of conduits and cables.

I would also mention the possibility offered of securing a portion of the "loan," passed upon at the November election, 1896, as it opens up to us the opportunity of obtaining the means to advance these services to a point of greater efficiency.

Our system of conduits makes a creditable showing, and with the additions made each year, is approaching a perfected system; during 1898 seventeen thousand six hundred and fifty-eight (17,658) feet of conduit, or one hundred and twenty thousand nine hundred (120,900) feet of duct was laid.

The facilities offered us by our conduits and those of private corporations, in which we have privileges, would enable us, were we to obtain the means to purchase cable, to place many of our wires underground for a greater portion of their length.

The value of an underground system of wires for electrical purposes is never more fully demonstrated, nor appreciated, than when from the effects of a storm of sleet,

snow and wind, the services supplied from wires overhead are at a standstill, while those placed in cables, laid underground, work uninterruptedly; a pleasing sequel to our determined effort of a number of years ago, when, in the face of great opposition from corporate friend and foe alike, we took the stand that wires intended for whatever purpose, placed in cables underground would fulfill the requirements for which they were intended, and that the future would prove us correct. It has taken but a few years to endorse our policy, and to-day the telegraph, telephone, electric light and trolley currents are largely carried by means of cables laid underground.

In view of this pleasing showing in favor of placing wires underground, I would suggest that the important electrical services under our care, be given due consideration, and that suggestions be made to Councils, that they furnish us with means to largely extend our existing underground system. I feel that these services are of such vital importance to the citizens of Philadelphia, that effort should be made to surround them with every safe-guard, and that placing them underground will be the strongest move made toward perpetuating the position we have gained, of being the first city in the country in municipal electrical affairs.

The absence of a fire signal box is never more fully deplored, or the lack of numerous stations of this nature more condemned, than when on the breaking out of a fire, many squares must be traversed to send in the alarm. This delay in transmitting is very often the cause of the fire's obtaining such a mastery, that a long time is necessary to extinguish it; the reverse being the case when the boxes, being close to each other, permit an early transmission of the alarm, and in most instances the extinguishment of the fire with but little loss.

While urging this matter, I desire to again mention the

necessity for placing fire signal boxes in each school, hospital and home, many of which are remote from the fire department and its apparatus, and when the handicap of having to travel long distances to send in an alarm is added, their chances for an early suppression of the flames are poor indeed. The condition of the invalids and incurables in many of these hospitals and homes, unable to care for themselves in the event of fire, and without a prospect of immediate help from the fire department, through lack of facilities for sending in an alarm, is indeed deplorable.

I would again call attention to the necessity for renewing the old police patrol instruments, placed in service during the year 1884. As stated in former reports, these instruments, made of the light material then in vogue, are so worn by the use to which they are constantly subjected, that it is only with the greatest difficulty and constant watchfulness, they are kept in service; as these instruments are grouped in districts by themselves, a failure to work would seriously cripple the police work of the district.

There is but one remedy, and that, renewing them with boxes of modern make, which being heavily built, will last a long term of years.

The quarters assigned this Bureau in City Hall, for its officers and clerks, are so contracted and cramped that it is almost impossible to properly transact the business of the Bureau.

To relieve this overcrowded condition, I have several times suggested that a section of the large room, on the north of that occupied by the Chief of this Bureau, now used by the Bureau of Health, be set aside for the use of this Bureau, but have been unable to secure it.

I most respectfully urge upon you the necessity for this extra room, in order that we may be better qualified to handle the always increasing business of this office.

We have long been in need of a building wherein our various supplies, now widely scattered, may be concentrated. The materials used in our underground and overhead construction are stored at three (3) different places, viz: on Filbert street, west of Fifteenth street, west of Seventeenth street and west of Twentieth srreet. This manner of locating supplies is exceedingly unsatisfactory, unhandy and expensive.

I would suggest and urge that provision be made for securing a building suitable for the purpose, in close proximity to the City Hall, wherein all materials used by the Bureau may be concentrated.

Opinions Handed Down by the Courts.

The Supreme Court of the State sitting at Pittsburg, on October 19th, handed down a decision in favor of the City and against the Kensington Electric Company, as follows:

"The company was by ordinance permitted to use certain streets of the City for the erection of its wires, etc., upon conditions, among which was the one that it should light station houses and fire stations free of cost to the City.

It lighted one such place, but did not light another, giving as its reason that the City was about to erect a new station house. When the new station was built, the City called upon the company to light it, but it refused, because of the large number of lights required, and on the technical ground that it was only required to light such places as were in existence at the time of the passage of the ordinance.

The defendants thereupon refused to allow warrants for the payment for other services rendered to the City by the company. The latter then obtained a mandamus from the Common Pleas Court to compel the defendants to do so, and they appealed the case to the Supreme Court.

In the opinion filed the Court says that if the company's contention that it was not liable to light new station houses were correct, it might in a very short time result in the release of the company from any liability at all in the premises. Besides, that view of the Court, will not favor proceeding by mandamus, when the matter in controversy can be determined by a suit at law; and the company should have brought suit against the City to recover whatever it claimed to be due it."

On November 4, 1898, in the United States Circuit Court, a jury rendered a verdict for $3,337.60 in favor of the City against the Western Union Telegraph Company, being the amount of license charges for 1889 and 1890, on all telegraph poles within the City limits, maintained by the defendants.

Ordinances of Councils were passed between 1880 and 1883, requiring the payment of $1.00 for every pole and $2.50 for every mile of wire used in the City.

The Western Union Telegraph Company refused to pay the license, claiming it was excessive, and was empowered by the City for the purpose of providing revenue, over and above the cost of regulating and supervising the telegraph poles and wires, and was, therefore, a tax upon them.

The defendants also maintained that in their office of transmitting intelligence from one State to another, they were engaged in commerce and that, therefore, the ordinances imposing the alleged tax upon telegraph poles and wires were in conflict with the provision of the Constitution of the United States, which confers upon Congress the sole power to regulate commerce among the several States, and were, therefore, void.

Under the verdict, the license charge of $1.00 for every pole was held to be reasonable, and the telegraph company liable therefor, but the charge of $2.50 for every mile of wire was considered excessive and disallowed.

The Supreme Court on May 2, 1898, handed down an opinion as follows:

"The Bell Telephone Company, relator, claims the right under the ordinance of 1879, granting permission to introduce its system into Philadelphia to lay its wires under the streets and to erect such terminal poles, etc., as it may deem necessary, subject only to the regulation of the use of the streets by general ordinances of Councils. The respondents on the other hand, on behalf of the City of Philadelphia, contend that the consent of Councils must be specially obtained for each extension of the relator's conduits or wires and the erection of each terminal pole. Neither of these opposing contentions can be sustained in its entirety.

The basis of the relator's rights is the ordinance of December 24, 1879, by which it was authorized to run and maintain its wires over and through the streets of the City of Philadelphia for the purpose of establishing telephonic communication between its patrons and between its exchange office and the subscribers thereto. Except certain preliminaries which were complied with, the only condition imposed by this ordinance was that the company should enter into a written obligation to comply with all the ordinances then existing or thereafter passed, 'regulating or in any manner controlling telegraph or telephone companies in the use of the streets for telegraph and telephone purposes.' The relator having accepted this obligation and constructed its lines, it is clear that the power of the City to impose conditions upon its grant of consent was ended. Its authority thereafter was only that of regulation as to the use of the streets.

The grant, however, of authority to run and maintain wires 'over and through' the streets, did not include permission to lay them under, below or beneath. Over and through are equivalent to across and along, not only by

the natural meaning of the words in this connection, but by the practical construction given to them at the time by the acts of the parties. The claims of the relator in this respect are too broad and cannot be sustained.

"But by the Ordinance of June 13, 1882, the relator in common with all others except the City of Philadelphia itself, was directed to remove all poles and wires from the streets prior to January, 1885, and prohibited from erecting any others after that date. The object of this ordinance is admitted to have been the substitution of the underground for the overhead system. No question was raised by the telephone company as to the reasonableness of this ordinance as a regulation of the use of the streets, and it proceeded to construct and put in operation in a considerable part of the City, its underground conduits and wires. By the concurrent act, therefore, of the City and the company, the mode of using the streets in the exercise of the latter's franchise has been changd from overhead to the underground system. No other change was made, and the franchise remains the same in all other respects. The original grant of consent extended to all the streets of the city. There was no limitation then, and there could be none imposed thereafter.

"The change to the new system was not made all at once, and the City by ordinances from time to time, postponed the date for the removal of the poles, and finally suspended the operation of the ordinance of 1882 in that respect till further action of Councils. Nor was it found practicable apparently by the telephone company to do away altogether with the use of poles, and in adopting its underground conduits; it has used what have been called in this case terminal poles, which though much fewer in number than the old telegraph poles, are much larger and more obstructive of the street. Permission for the location and construction of conduits and the erection of such

poles has from time to time been granted by special ordinance, on application to Councils, and licenses from the superintendent of the police and fire alarm telegraph, and later, from the Department of Public Safety. Question having been made, however, as to the issuance of such licenses, the Mayor was of opinion that he might do so, but in January, 1897, he submitted the matter to Councils, recommending the passage of a resolution giving express authority to the Director of Public Safety.

"Councils, however, on February 4, 1897, passed instead a resolution directing the 'Department of Public Works and Safety. . . . not to issue any permits for the construction of underground service or the erection of terminal poles, unless the same has been duly authorized by ordinance of Councils.' Thereafter the Director of Public Safety deeming himself without power, refused to issue any further licenses, and hence the filing of this petition by the telephone company.

"The Ordinance of 1879 as already discussed, put no restriction on the streets or localities to be occupied by the telephone company, nor did the Ordinance of 1882. The latter authorized, and in fact commanded, the replacement of the overhead by the underground system and in so doing, it necessarily authorized the construction of conduits, terminal poles or any such appliances as are or may be reasonably necessary to make the system effective. And the determination as to what streets should be occupied was no longer in Councils, but in the telephone company, except possibly so far as any particular street might be so exceptionally situated as to take it out of the general rule. The Ordinance, therefore, of January 12, 1888, and others of like kind, granting permission to lay conduits in certain streets, were unnecessary, and except so far as the provisions as to the manner of doing the work, at night, etc., may be valid regulations, were inoperative.

"While the City, however, has parted with its power to designate the streets to be occupied, it has expressly retained the authority to regulate the manner of occupation. And this includes the power to compel the adoption from time to time of all reasonable and generally accepted improvements which tend to decrease the obstruction of the streets or increase the safety or convenience of the public in their use. By the Ordinance of January 6, 1881, 'to regulate the erection and maintenance of telegraph poles' in the City of Philadelphia, any corporation or person authorized to erect telegraph poles, was required to obtain a license from the Superintendent of the Police and Fire Alarm Telegraph, who was authorized to receive the applications, hear objections and grant the license with such conditions, etc., as the case should require to secure the purposes of the ordinance. Under the Bullitt Bill of 1885, the duties and authority of the Superintendent of the Police and Fire Alarm Telegraph passed to the Department of Public Safety, which is now vested with the authority to issue licenses for telegraph poles, etc., under the Ordinance of 1881 and with the general supervision of the subject. The power being administrative in its nature and lodged in an executive department, cannot be controlled by Councils, under the prohibition of the Act of 1885, Article XVI, P. L. 54. The resolution of February 4, 1897, was therefore beyond the province of Councils and of no effect.

"The judgment of the learned court below was in substantial accord with the principles so far discussed, but overlooked one point of at least technical importance. The case was heard on petition and answer, and the averments of the latter must be taken to be true. In paragraph 7, it is denied that terminal poles are a necessary part of the operation of the underground system; in paragraph 10 it is averred that the poles if licensed at all, should be lo-

cated by the Electrical Bureau, with a view to the interests of the City and the property owners and the convenience of the public; and in paragraph 13, it is averred that there is another system which dispenses with terminal poles, already in use by another company, and which could be used by the relator. These averments raise questions of fact which the respondents are entitled to have determined before the issue of a peremptory mandamus. The Ordinance of 1881 requires the applicant for license to designate the places where the poles are to be erected, but gives the Department authority to revise and modify the particulars before issuing the license. We presume that this is all that is meant to be claimed by paragraph 10 of the answer, and if so, it is clearly within the province of the Department. The other matters if insisted upon may be more serious. As already said, the power of regulation includes the power to compel the adoption of reasonable and generally accepted devices which increase the safety and convenience of the public. The use of terminal poles being the system heretofore adopted, the burden of showing that there is a better one, in general acceptance and reasonably adoptable by the telephone company will be upon the City. Whether the Director of Public Safety, in view of the expression in his letter of December 10, 1896, to the Mayor, that 'in fact, with the underground conduits terminal poles are alone practicable,' will be disposed to insist now on a different system is for him to determine. The matter is largely within his discretion, and now that he is free from the prohibition of the resolution of February 4, 1897, and restored to his proper control of the subject, we presume he can readily come to an agreement with the relator. But for the present, the answer must stand as raising an issue of fact which must be disposed of before final judgment.

"Judgment reversed and procedendo awarded."

Under this opinion The Bell Telephone Company has laid a large amount of conduit underground, as may be seen under heading "Bell Telephone Conduits," and erected a number of terminal poles.

Conduits (City).

Seventeen thousand six hundred and fifty-eight (17,658) feet of conduit, aggregating one hundred and twenty thousand nine hundred (120,900) feet of duct was laid during the year.

Eight (8) duct Valentine conduit was laid as follows:

Two thousand two hundred and eleven (2,211) feet, ten (10) inches on Broad street, from Diamond street to north side Columbia avenue; two hundred and thirty-one (231) feet six (6) inches on Columbia avenue, from Broad street to Carlisle street; two thousand six hundred and thirty (2,630) feet one (1) inch on Carlisle street, from Columbia avenue to north side Girard avenue; eighty-three (83) feet six (6) inches on Girard avenue, from Carlisle street to Broad street. Fifteen (15) manholes were built in connection with the above.

Williamsport tube, or pump logs were laid, as follows:

Twelve (12) duct, seventy-two (72) feet across Pine street at Broad street; thirty-two (32) feet across Columbia avenue at Broad street; seventy (70) feet of eight (8) duct across Girard avenue at Carlisle street; six (6) ducts were laid as follows:

Six thousand one hundred and twenty-four (6,124) feet on Pine street, Water street to Broad street; three thousand nine hundred and ninety-five (3,995) feet on Pine street, from Broad street to Twenty-third street.

Twenty-nine (29) manholes were built in connection with the above.

Four (4) ducts were laid, as follows:

Five hundred and thirty-seven (537) feet on Button-

wood street, from Tenth street to Ridge avenue; three hundred and seventy-two (372) feet, Fourth street and Girard avenue to Engine Company No. 29; three hundred and seventy-six (376) feet, from Eighteenth and Callowhill streets to Ninth District Sub-station; eighty (80) feet on Pine street, from Delaware avenue to Water street; thirteen (13) feet, Broad and Diamond streets, from City into American Telegraph and Telephone Co.s manhole; fifteen (15) feet, Broad and Columbia avenue, from Columbia Electric Light Co.s manhole into City manhole.

Two (2) ducts have been laid as follows:

Seventy-seven (77) feet at Twenty-third and Callowhill streets; fifteen (15) feet at Ridge avenue and York street; thirty-one (31) feet at Front and Girard avenue; thirty-six (36) feet at Tenth street and Girard avenue; twelve (12) feet at Broad and Berks streets, from City manhole into American Telegraph and Telephone Co.'s manhole; twenty-nine (29) feet at Carlisle street and Girard avenue, between City and American Telegraph and Telephone Co.'s manhole; one hundred and fifty-eight (158) feet at Lancaster and Haverford avenues; and seventy-nine (79) feet of single duct laid into United States Mint; a total of fifty-one (51) manholes were built connecting the various conduit laid by this Bureau during the year.

Preceding the excavation for the subway across Broad street, between Callowhill and Willow streets, the conduits of the City and American Telegraph and Telephone Company were taken up; on the completion of the bridge at that point, the Bureau of Surveys, to restore this service, laid thirty-six (36) two and one-half ($2\frac{1}{2}$) inch galvanized iron pipe, each two hundred and eighty-five (285) feet long, under the deck on the west side of the bridge. Twelve (12) of this number are placed in position to replace those taken up, belonging to the Telegraph and Telephone Company.

The City's conduit crossing the line of the subway at Twenty-third and Spring Garden streets, prior to excavating at that point, was taken up, but has since been relaid, except on the east side, where temporary railroad tracks are in the position to be occupied by it.

The conduit at Twenty-third and Green streets, crossing the subway, was removed and when excavations were completed, restored to its former position. On account of the new grade established at Twenty-sixth street and Fairmount avenue, the two (2) ducts crossing at that point into Fairmount Park were taken up and have not been replaced.

The following table will show the cost per foot per duct and per mile, of the conduit laid during 1898, including the manholes and the restoration of the street complete and ready for the cables:

Broad street, Girard avenue, Carlisle street and Columbia avenue, eight (8) ducts; 17.04 cents per foot, $999.71 per mile.

Pine street, Delaware avenue to Twenty-third street, six (6) ducts; 18.97 cents per foot, $1,001.62 per mile.

Rental of Ducts in City Conduits.

Under the provisions of the Ordinance of April 10, 1893, this Bureau has leased ducts and wires to a number of companies, who are authorized by ordinance to maintain their services within the City limits. The revenue paid into the City Treasury from this source amounts to ~~$8,913.88~~, as follows:

Philadelphia, Reading & Pottsville Telegraph Co.:

One (1) duct on north side of Market street, from first manhole east of Twelfth street to manhole in front of Ridgway House, east of Water street, a distance of four thousand nine hundred and eighty-four (4,984) feet; also one (1) duct on Second street, from Market street to Berks

street, a distance of ten thousand seven hundred and seventy (10,770) feet, a total distance of 15,754 feet, or 2.983 miles $750 00

American Telegraph and Telephone Company:

One (1) duct on east side of Broad street, from north side of Chestnut street to south side of Washington avenue, a distance of four thousand eight hundred and seventy (4,870) feet $300 00

Western Union Telegraph Company:

Four (4) ducts on Market street, from Water street to east end of bridge, and on Tenth street, from Market street to south of Chestnut street two (2) miles and one thousand four hundred and seventy-eight (1,478) feet each) $3,000 00

One (1) duct east end of Market street bridge to Thirtieth street, one thousand one hundred and fifty-one (1,151) feet; one (1) duct on Market street, from Thirtieth street to Thirty-second street, one thousand four hundred and forty-four (1,444) feet; one (1) duct on Walnut street, from Front street to Delaware avenue, two hundred and eighty (280) feet; one (1) duct on Fifth street, from Market street to the Bourse, two hundred and eighty-two (282) feet; two (2) ducts on Third street, from Market street to south of Chestnut street, six hundred and thirty-six (636) feet each, one thousand two hundred and seventy-two (1,272) feet; total, 4,429 feet.. 300 00

Total.....$3,300 00

Pennsylvania Railroad Company:

One (1) duct on Market street, from Delaware avenue, via Juniper, Filbert and Merrick streets to Fifteenth street;

one (1) duct on Fifth street, from Market street to the Bourse Building; one (1) duct on Walnut street, from Front street to No. 8 Walnut street, and one (1) duct on Front street, from Market street to Dock street (Girard Estate leased to the City); in all, one (1) mile and four thousand seven hundred and thirty (4,730) feet..$550 00

The Bell Telephone Company of Philadelphia:

One (1) duct on Broad street, between Filbert street and Germantown avenue, three (3) miles and four thousand six hundred and sixty-seven (4,667) feet.. $950 00

One (1) duct on Ridge avenue, between Vine street and Columbia avenue, one (1) mile and four thousand seven hundred and ninety-one (4,791) feet 550 00

$1,500 00

Postal Telegraph Cable Company:

One (1) duct on north side of Market street, from No. 9 Market street, via Juniper, Filbert and Merrick streets to Powelton avenue, a distance in all of three (3) miles and three thousand seven hundred and sixty-eight (3,768) feet $950 00

Postal Telegraph Cable Company:

One (1) duct on Second street, from Market street to Diamond street (eleven thousand eight hundred and sixty-two (11,862) feet; one (1) duct on Market street, from Second to Tenth streets, three thousand seven hundred and thirty-three (3,733) feet; three (3) ducts on Tenth street, Marble alley and Cameronian court two thousand one hundred and forty-five (2,145) feet; two (2) ducts on Third street, Market street to south of Chestnut street one thousand two hundred and seventy-two (1,272) feet, and one (1) duct on Fifth street, from Market street to the Bourse

two hundred and eighty-two (282) feet; in all, nineteen thousand two hundred and ninety-four (19,294) feet. $950 00

Rental of Wires in City Conduits.

Philadelphia, Reading & Pottsville Telegraph Co.:

Eighteen (18) conductors from the Reading Terminal Building along Market and Tenth streets to the office of the Western Union Telegraph Company, a distance of one thousand six hundred and fifty (1,650) feet, making in all, five (5) miles and three thousand three hundred (3,300) feet of single conductors or wires..... $60 00

Western Union Telegraph Company:

Six (6) conductors, from the Reading Terminal Building along Market and Tenth streets to the office of the Western Union Telegraph Company, a distance of one thousand six hundred and fifty (1,650) feet, making in all, one (1) mile and four thousand six hundred and twenty (4,620) feet of single conductors or wires..... $20 00

Pennsylvania Railroad Company:

Nine (9) miles of single conductors on Thirteenth street, Market to Chestnut streets, and on Chestnut street, Thirteenth to Broad street, and on Ninth street, Market street to south side of Chestnut street..... $90 00

The United Gas Improvement Company:

Three (3) wires on Broad street, from City Hall to McKean street, twelve thousand two hundred and thirteen (12,213) feet, making, thirty-six thousand six hundred and thirty-nine (36,639) feet; two (2) wires on Broad street, from City Hall to Germantown avenue, twenty-three thousand six hundred and ninety-eight (23,698) feet, making forty-seven thousand three hundred and ninety-six (47,396) feet; two (2) wires on Girard avenue, from Broad street

to ~~North~~ Frankford avenue, seven thousand three hundred and sixty-seven (7,367) feet, making fourteen thousand seven hundred and thirty-four (14,734) feet; two (2) wires on Market street, from City Hall to Front street, six thousand nine hundred and thirty-one (6,931) feet, making thirteen thousand eight hundred and sixty-two (13,862) feet; two (2) wires on Fifth street, from Market street to Chestnut street and into Drexel Building, eight hundred and sixty-five (865) feet, making one thousand seven hundred and thirty (1,730) feet; three (3) wires on Market street, from City Hall to Thirty-second street, eight thousand two hundred and fifty (8,250) feet, making twenty-four thousand seven hundred and fifty (24,750) feet; four (4) wires on Market street, from City Hall to Powelton avenue, fourteen thousand seven hundred and sixty-three (14,763) feet, making fifty-nine thousand and fifty-two (59,052) feet; a total of thirty-seven (37) miles and two thousand eight hundred and three (2,803) feet of wire at $380 00

Two (2) wires on Twenty-third street, from Market to Callowhill street, two thousand eight hundred and ninety (2,890) feet, making five thousand seven hundred and eighty (5,780) feet; two (2) wires, from Twenty-third and Callowhill streets to Twenty-fifth street and Fairmount avenue, two thousand eight hundred and eighty (2,880) feet, making five thousand seven hundred and sixty (5,760) feet; two (2) wires on Fairmount avenue, from Twenty-fifth street to Broad street, five thousand four hundred and ninety-eight (5,498) feet, making ten thousand nine hundred and ninety-six (10,996) feet; two (2) wires on Broad street, from Fairmount avenue to Indiana avenue, twelve thousand four hundred and twenty-eight (12,428) feet, making

twenty-four thousand eight hundred and fifty-six (24,856) feet; two (2) wires on Broad street, from Indiana avenue to Germantown avenue, four thousand four hundred and eleven (4,411) feet, making eight thousand eight hundred and twenty-two (8,822) feet; two (2) wires from Juniper and Filbert streets, via Market street to Twenty-third and Market streets, five thousand five hundred and twenty-five (5,525) feet, making eleven thousand and fifty (11,050) feet; a total of twelve (12) miles and three thousand nine hundred and four (3,904) feet of wire at.. $130 00

Two (2) wires on Market street, from Twenty-second to Twenty-third street, three hundred and thirty-nine (339) feet, making six hundred and seventy-eight (678) feet; two (2) wires on Twenty-third street, from Market street to Callowhill street, two thousand eight hundred and ninety (2,890) feet, making five thousand seven hundred and eighty (5,780) feet; two (2) wires from Twenty-third and Callowhill streets to Twenty-fifth street and Fairmount avenue, two thousand eight hundred and eighty (2,880) feet, making five thousand seven hundred and sixty (5,760) feet; two (2) wires on Fairmount avenue, from Twenty-fifth street to Broad street, five thousand four hundred and ninety-eight (5,498) feet, making ten thousand nine hundred and ninety-six (10,996) feet; two (2) wires on Broad street, from Fairmount to Columbia avenues, four thousand six hundred and twenty (4,620) feet, making nine thousand two hundred and forty (9,240) feet; two (2) wires on Broad street, from Fairmount avenue to City Hall, six thousand three hundred and

eighty-three (6,383) feet, making twelve thousand seven hundred and sixty-six (12,766) feet; a total of eight (8) miles and two thousand nine hundred and eighty (2,980) feet of wire at.... $90 00

Two (2) wires on Market street, from Twenty-second to Twenty-third street, three hundred and thirty-nine (339) feet, making six hundred and seventy-eight (678) feet; two (2) wires on Twenty-third street, from Market street to Callowhill street, two thousand eight hundred and ninety (2,890) feet, making five thousand seven hundred and eighty (5,780) feet; two (2) wires from Twenty-third and Callowhill streets to Twenty-fifth street and Fairmount avenue, two thousand eight hundred and eighty (2,880) feet, making five thousand seven hundred and sixty (5,760) feet; two (2) wires on Fairmount avenue, from Twenty-fifth street to Ridge avenue, five thousand four hundred and ninety-eight (5,498) feet, making ten thousand nine hundred and ninety-six (10,996) feet; two (2) wires on Ridge avenue, from Broad street to Lehigh avenue, fourteen thousand five hundred and six (14,506) feet, making twenty-nine thousand and twelve (29,012) feet; a total of nine (9) miles and four thousand seven hundred and six (4,706) feet of wire, at..... 100 00

Total..... $700 00

Conduits Laid by Private Corporations.

The Union Traction Company have laid during the year four thousand and fifteen (4,015) feet of nine (9) duct conduit, on Chelten avenue, between Stenton avenue and York road.

The Pneumatic Transit Company have laid forty-two (42) feet of conduit, as follows:

On the south side of Filbert street, east of Twelfth street, from manhole to alley of the Philadelphia and Reading Railroad Company; across Hunter street, west of Eleventh street, adjacent to the Reading Terminal.

The Philadelphia, Reading and Pottsville Telegraph Company have laid one hundred and thirty-eight (138) feet of conduit, as follows:

From the west to the east side in front of 114 South Delaware avenue.

The Columbia Electric Light Company have added to their system of underground conduits, three thousand one hundred and ninety-one (3,191) feet, as follows:

On the west side of Eighteenth street, from the south side of Girard avenue to the north side of Montgomery avenue.

The total amount of underground conduit laid by the Diamond Electric Company is as follows:

Four hundred and sixteen (416) feet north side of Berks street, between Sixteenth and Seventeenth streets; two hundred and fifteen (215) feet east side of Seventeenth street, between Glenwood and Sedgeley avenues, or six hundred and thirty-one (631) feet in all.

Twenty thousand five hundred and eighty-four (20,584) feet have been added by the Edison Electric Light Company to their system of underground conduits, as follows:

On the east side of Sixth street, from north side of Arch street to south side of Race street.

On east side of Second street, from south side of Walnut street to south side of Dock street.

On south side of Dock street, from east side of Second street to west side of Mattis street.

On west side of Mattis street, from south side of Dock street to south side of Spruce street.

On south side of Spruce street, from west side of Mattis street to east side of Front street.

On east side of Front street, from south side of Spruce street to south side of Walnut street.

On west side of Third street, from south side of Arch street to south side of Callowhill street.

On west side of Eleventh street, from north side of Arch street to No. 106 North Eleventh street.

On west side of Ninth street, from south side of Walnut street to south side of Locust street.

On the north side of Cuthbert street, from the east side of Fifteenth street to the west side of Broad street.

On the south side of Penn Square, from the east side of Fifteenth street to the west side of Broad street.

On the west side of Broad street, from the south side of Penn Square to the north side of Chestnut street.

On the south side of Locust street, from the east side of Eighteenth street to the west side of Seventeenth street.

On the south side of Locust street, from the west side of Seventeenth street to the east side of Fifteenth street.

On the east side of Sixteenth street, from the south side of Locust street to the south side of Walnut street.

On the south side of Market street, from the east side of Nineteenth street to the west side of Twenty-first street.

On the west side of Broad street, from the north side of Cuthbert street to the south side of Callowhill street.

On the east side of Ninth street, from the north side of Chestnut street to the north side of Market street.

On the north side of Goodwill's alley, from the east side of Ninth street to the east side of Billington's street.

On north side of Ninth street, from the northwest corner Sansom street to the northeast corner of Sansom street.

On the west side of Eighth street, from the north side of Market street to the north side of Arch street.

On the east side of Fifth street, from the north side of Arch street to the south side of Race street.

On the northwest corner of Mattis street, from the south side of Spruce street to the east side of Second street.

On the east side of Second street, from the northwest corner of Mattis street to the north side of Pine street.

On the east side of Front street, from the south side of Spruce street to the north side of Pine street.

On the north side of Pine street, from the west side of Delaware avenue to the east side of Front street.

On the west side of Delaware avenue, from the north side of Dock street to the north side of Pine street.

On the north side of Dock street, from the west side of Delaware avenue to the east side of Front street.

On the north side of Race street, from the east side of Ninth street to the east side of Twelfth street.

On the north side of Race street, from the east side of Twelfth street to the west side of Thirteenth street.

On the north side of Race street, from the west side of Thirteenth street to the west side of Broad street.

On the west side of Seventeenth street, from the north side of Arch street to the south side of Cuthbert street.

On the south side of Cuthbert street, from the west side of Seventeenth street to No. 1709 Cuthbert street.

On the east side of Twelfth street, from the north side of Arch street to the north side of Race street.

On the north side of Sansom street, from the east side of Eighth street to the east side of Seventh street.

East side of Twenty-first street, from the south side of Spruce street to the north side of Granville street.

On the east side of Twelfth street, from the north side of Market street to the south side of Market street.

The Pennsylvania Heat, Light and Power Company of Philadelphia have added eighteen thousand five hundred

and eighty-six (18,586) feet to their system of underground conduits, as follows:

On east side of Eighteenth street, from the south side of Vine street to the north side of Spring Garden street.

On the south side of Buttonwood street from the east side of Nineteenth street to the west side of Seventeenth street.

On the north side of Spring Garden street, from the east side of Eighteenth street to the east side of Nineteenth street.

On the north side of Spring Garden street, from the east side of Nineteenth street to the east side of Twentieth street.

On the north side of Spring Garden street, from the east side of Eighteenth street to the west side of Seventeenth street.

On the east side of Nineteenth street, from the north side of Spring Garden street to Mt. Vernon street.

On the east side of Nineteenth street, from the south side of Mt. Vernon street to the north side of Wallace street.

On the east side of Nineteenth street, from the north side of Wallace street to the south side of Fairmount avenue.

On the east side of Nineteenth street across Fairmount avenue.

On the east side of Nineteenth street, from the north side of Fairmount avenue to the south side of Ginnodo street.

On the south side of Ginnodo street, from the east side of Nineteenth street to the west side of Ridge avenue.

On the south side of Ginnodo street across Ridge avenue.

On the east side of Ridge avenue, from the south side of Ginnodo street to the west side of Eighteenth street.

On the west side of Eighteenth street, from Ridge avenue to the south side of Girard avenue.

On the north side of Wallace street, from the west side of Eighteenth street to the east side of Nineteenth street.

On the north side of Green street, from the east side of Twentieth street to the west side of Fifteenth street.

On the north side of Green street, from the east side of Twentieth street to the east side of Twenty-third street.

On the east side of Tenth street, from the north side of Sansom street to the north side of Chestnut street.

On the east side of Twelfth street, from the north side of Market street to the north side of Arch street.

On the south side of Callowhill street, from the west side of Broad street to the west side of Eighteenth street.

On the south side of Callowhill street, from the west side of Eighteenth street to the west side of Twenty-third street.

On the south side of Callowhill street, to the north side of Callowhill street.

On the north side of Callowhill street, from the west side of Twenty-third street to the west side of Twenty-fifth street.

On the north side of Callowhill street to the south side of Callowhill street.

On the south side of Callowhill street, from the west side of Twenty-fifth street to Callowhill Street Station.

On the south side of Poplar street, from the east side of Ridge avenue to the east side of Seventeenth street.

On the east side of Seventeenth street, from the south side of Poplar street to the north side of Bell Telephone Office.

Seventy thousand five hundred and ninety-two and nine-tenths (70,592.9) feet of conduit has been laid by the Bell Telephone Company, as follows:

On Tioga street, from Frankford avenue to Coral street.

On Lehigh avenue, from North Third street to Reese street.

On Hancock street, from Thompson street to manhole north of Thompson street.

On Cadwallader street, from manhole east of Fifth street to manhole south of Berks street.

On Lawrence street, from Berks street to manhole north of Berks street.

On Phillip street, from Berks street to manhole north of Berks street.

On Howard street, from Berks street to manhole north of Berks street.

On Thompson street, from Hanover street to Marlborough street.

On Marlborough street, from Thompson street to 1231 Marlborough street.

On Emerald street, south of manhole from North Front street to Boston avenue.

On Boston avenue, from Emerald street to alley south of Jasper street.

On Kensington avenue, from Front street to Adams street.

On North College avenue, from Ridge avenue to North Twenty-second street.

On Thompson street, from Twenty-second street to Thirty-second street.

On Twenty-third street, from Thompson street to Master street.

On Columbia avenue, from Front street to Hancock street.

On Howard street, from Columbia avenue to Howard street, between 1722-24.

On Shackamaxon street, from Richmond street to 1114 Leopard street.

On Thompson street, from Front street to Eighth street.

On Howard street, from Thompson street to 1334-36 Howard street.

On Calwallader street, from Thompson street to opposite 1216 Cadwallader street.

On Canal street, from Thompson street to Lawrence street.

On Marshall street, from Thompson street to 1225-27 Marshall street.

On Eighth street, from Thompson street to 1325 North Eighth street.

On Palmer street, from Frankford avenue to Sepviva street.

On Ridge avenue, from North Twenty-seventh street to North Thirty-first street.

On Page street, from Ridge avenue to 2948 Page street.

On North Thirtieth street, from Ridge avenue to 2122-24 North Thirtieth street.

On North Thirty-first street, from Ridge avenue to Dakota street.

On Dakota street, from Thirty-first street to 3025 Dakota street.

On North Front street, from Palmer street to Thompson street.

On Jefferson street, from Front street to Hancock street.

On Hancock street, from Jefferson street to between 1523-25 Hancock street.

On Thompson street, from Hutchinson street to Carlisle street, west manhole.

On Warnock street, from Thompson street to 1322 Warnock street.

On Watts street, from Thompson street to Watts street north.

On Carlisle street, from Thompson street, east manhole, to 1310 Carlisle street north.

On Richmond street, from south manhole, Lehigh avenue to Williams street.

On South Thirty-sixth street, from No. 4 South Thirty-sixth street to Locust street.

On Huntingdon street, from Frankford avenue to Collins street.

On Auburn street, from Frankford avenue to Coral street.

On Clearfield street, from Amber street to Ruth street.

On Westmoreland street, from Frankford avenue to Amber street.

On South Thirteenth street, from Rodman street, south manhole, to Ellsworth street.

On South Thirteenth street, from Wharton street to Dickinson street.

On North Seventeenth street, from Poplar street to manhole north of Poplar street.

On South Thirteenth street, from Dickinson street to Mifflin street.

On Kimball street, from South Thirteenth street to 1321 Kimball street.

On Sigel street, from South Thirteenth street to front of alley.

On Catherine street, from South Thirteenth to Clarion street.

On Montrose street, from South Thirteenth street to 1233 Montrose street.

On Alter street, from South Thirteenth street to manhole west of Thirteenth street.

On York street, from Park avenue to north of Seventeenth street.

On Park avenue, from York street to Cumberland street.

On Carlisle street, from York street to 2353 Carlisle street.

On South Fortieth street, from No. 7 South Fortieth street to Woodland avenue.

On South Thirtieth street, from Ludlow street to south of Walnut street.

On Oxford street, from North Seventeenth street to Carlisle street.

On Oxford street, north of Seventeenth street, to Gratz street.

On Lehigh avenue, from Third street to north of Reese street.

On Hancock street, from Lehigh avenue to manhole north of Lehigh avenue.

On Oxford street, from Carlisle street to Camac street.

On Carlisle street, from Oxford street to No. 1638, manhole.

On Sydenham street, from Oxford street to manhole No. 1628.

On Germantown avenue, from New Market street to Ellen street.

On Willington street, from Oxford street to opposite 1622 Willington street.

On Gratz street, from Oxford street to 1610 Gratz street.

On Montgomery avenue, from No. 917 Montgomery avenue to Sydenham street.

On Marvine street, from Montgomery avenue to opposite 1735 Marvine street.

On Camac street, from Montgomery avenue to manhole above 1744.

On Watts street, from Montgomery avenue to rear of 1712 Park avenue.

On Belmont avenue, from Westminster avenue to Merion street.

On Merion street, from Belmont avenue to west of Belmont avenue.

On Eleventh street, from Market street to manhole.

On Eleventh street, from manhole to Race street, north of manhole.

On Eleventh street, from Race street north of manhole to Vine street.

On New Market street, from Green street to Brown street.

On New Market street, from Green street to opposite manhole 504.

On New Market street, from Germantown avenue to Laurel street.

On New Market street, from Produce street to Callowhill street.

On New Market street, from Callowhill street to manhole above 339.

On Callowhill street, from New Market street to Water street.

On Water street, from Callowhill street to Vine street.

On Green street, from American to Beach street.

On Brown street, from New Market to Beach street.

On Beach street, from Brown street to Canal street.

On Canal street, from Beach street to Delaware avenue.

On Delaware avenue, from Fairmount avenue to Pier No. 37½, North Wharves.

On Front street, from Poplar street to Laurel street, south manhole.

On Front street, from Laurel street, south manhole, to Allen street.

On Front street, from Richmond street to Wildey street

On Hancock street, from Wildey street to opposite manhole No. 1139.

On Laurel street, from New Market street to Beach street.

On Preston street, from Market street, manhole south to manhole north.

On Preston street, from Market street to manhole north to manhole.

On Preston street, from manhole to basement telephone building.

On Seventeenth street, from manhole to basement Telephone Building.

On Ridge avenue at Twenty-first street, from Bell manhole to U. T. manhole.

On York street at Twenty-first street, Bell manhole to U. T. manhole.

On Sansom street, from manhole east Fifteenth street to manhole rear L. T. & T. Co.'s building.

On Sansom street, from manhole on Sansom street to alleyway rear of Lafayette Hotel.

On Eleventh street, from manhole on Eleventh street to basement of telephone building.

Conduits, Total Returns.

The return made to this Bureau by the various companies, authorized by Councils, to maintain underground electrical structures, together with those laid by the City, shows there has been placed underground two million six hundred and fifty-eight thousand one hundred and sixteen (2,658,116) feet of conduit, an increase of two hundred and seventy-eight thousand seven hundred and twenty-eight (278,728) feet over 1897, representing an aggregate of eighteen million seven hundred and thirteen thousand five hundred and ninety-nine (18,713,599) feet of duct, an increase of one million thirty-eight thousand two hundred and ninety-three (1,038,293) feet, of which the City owns two hundred and seventy-two thousand four hundred and fifty (272,450) feet of conduit, an increase of seventeen thousand six hundred and fifty-eight (17,658) feet, or one million eight hundred and eighty-seven thousand two hundred and sixty-six (1,887,266) feet of duct,

an increase of one hundred and twenty thousand nine hundred (120,900) feet.

Cables Laid by City.

One hundred thousand five hundred and nineteen (100,519) feet of telegraph and telephone cables have been laid during the year, as follows:

Six thousand three hundred and eight-three (6,383) feet of 52 conductor, composed of No. 18 B. & S. gauge, on east side of Broad street, from City Hall to Fairmount avenue; ten thousand seven hundred and sixty-eight (10,768) feet of 52 conductor, composed of 26 No. 16 and 26 No. 18, on the east side of Ridge avenue, from Melon street to the north side of Diamond street.

Forty-two conductor cable, composed of 20 No. 16, and 22 No. 18 B. & S. gauge, were laid as follows:

Four thousand one hundred and sixty-one (4,161) feet on east side of Ridge avenue, from the north side of Diamond street to Lehigh avenue; three hundred and twenty-five (325) feet on the east side of Second street, from Spruce street to DeLancy place; two thousand seven hundred and one (2,701) feet on the east side of Twenty-sixth street, from Fairmount avenue to Girard avenue; two thousand two hundred and forty-four (2,244) feet on the south side of Girard avenue, from Ridge avenue to the east side of Broad street, four thousand five hundred and ninety (4,590) feet on the east side of Tenth street, from Callowhill street to Girard avenue.

Two thousand seven hundred and fifty-nine (2,759) feet on the west side of Fourth street, from Fairmount avenue to Girard avenue.

Eight hundred and one (801) feet on the east side of Tenth street, from Girard avenue into Twelfth District Station House, northeast corner of Tenth and Thompson streets; two thousand nine hundred and twenty (2,920)

feet on Front street, from Fairmount avenue to Girard avenue; four hundred and thirty (430) feet southwest corner of Fourth street and Girard avenue, into Engine No. 29; forty (40) feet between Long Distance and Northern Electric Light and Power Co.'s manhole, Front street, and Girard avenue; forty (40) feet between Long Distance and Northern Electric Light and Power Co.'s manhole, at Fourth street and Girard avenue; twenty (20) feet between Long Distance and Northern Electric Light and Power Co.'s manhole, at Tenth street and Girard avenue.

Forty-three conductor Western Electric cable, composed of 23 No. 16 and 10 No. 18 B. & S. gauge, have been placed in cable poles, as follows:

At Ridge and Lehigh avenues and into Fifteenth District Police Station; a piece of 32 conductor, Western Electric cable, eighty-five (85) feet long has been placed between the City and Long Distance manholes, at Broad street and Girard avenue; ninety (90) feet of No. 18 B. & S. gauge cable has been laid between City and Long Distance manholes, at Broad street and Girard avenue, and one hundred and eighty (180) feet from cable pole into Twenty-second District Station House, Park and Lehigh avenues; sixty (60) feet of 26 conductor, composed of 14 No. 16 and 12 No. 18, has been placed between City and Long Distance manholes, at Ridge and Girard avenues; three hundred and seventy-five (375) feet of 33 conductor, composed of 15 No. 16 and 18 No. 18 B. & S. gauge, from Ridge avenue and Jefferson street into Twenty-third District; and one hundred and eighty-five (185) feet into Thirty-second District Station House.

Twenty-six conductor cable, composed of 14 No. 16 and 12 No. 18 has been laid as follows:

Eighty (80) feet on cable pole, Fortieth and Market streets; two hundred and sixty (260) feet, from Tenth and Buttonwood streets, into Eighth District Station

House; one hundred and forty (140) feet into Seventh District Station House.

Twenty-five conductor No. 16 B. & S. gauge has been laid as follows:

One thousand one hundred and sixty-four (1,164) feet on Broad street, from Susquehanna avenue to York street; and seventy (70) feet on cable pole Thirty-first street and Girard avenue; five hundred and twenty-five (525) feet 17 conductor No. 16, placed under Reading Railroad bridge, Richmond street at Lehigh avenue.

Seventeen conductor, composed of 7 No. 16 and 10 No. 18 has been laid into The United Gas Improvement Co.'s office, Twenty-second street and Market street, and up cable pole, Delaware avenue and Race street.

Sixteen conductor, composed of 16 No. 18 has been laid as follows:

Seven hundred and seventy-five (775) feet, from Broad and Locust streets into Fifth District Station House; eighty (80) feet into Sixteenth District Station House; one hundred and fifty (150) feet on cable pole Seventeenth District; one hundred and seventy (170) feet cable pole, Thirtieth District; two hundred and ninety (290) feet under Pennsylvania Railroad bridge at Germantown and Sedgley avenues; two hundred and fifteen (215) feet cable pole, Fortieth street and Haverford avenue.

Sixteen conductor, composed of 16 No. 16 B. & S. gauge has been laid as follows:

Four hundred and seventy-five (475) feet, Eighteenth and Callowhill streets, into Ninth District Sub-Station; eighty (80) feet into Sixteenth District Station; one hundred and fifty (150) feet cable pole, Seventeenth District; one hundred and seventy (170) feet cable pole, Thirtieth District; one hundred and eighty (180) feet cable pole, Twenty-second District; one hundred and seventy-five (175) feet, Frankford creek; two hundred and fifteen

(215) feet cable pole, Fortieth street and Haverford avenue.

One thousand three hundred and thirty (1,330) feet of 22 conductor, composed of 12 No. 16 and 10 No. 18 B. & S. gauge has been laid on South street, Twenty-third to Twenty-seventh streets; one hundred and fifty (150) feet 17 conductor, composed of 7 No. 16 and 10 No. 18 has been placed on cable pole, at Twenty-seventh District; 10 conductor cable, composed of 6 No. 16 and 4 No. 18 B. & S. gauge has been laid as follows:

Four thousand three hundred and seventy-one (4,371) feet on Mt. Vernon street, from Broad to Twenty-third street; five thousand two hundred and sixty-two (5,262) feet on Green street, from Broad to Twenty-fifth street; four thousand three hundred and thirty-five (4,335) feet on Wallace street, from Broad street to Twenty-third street, two thousand five hundred and forty-nine (2,549) feet on Twenty-third street, from Spring Garden street to Ninth District; five hundred and thirty-five (535) feet on Twenty-third street, from Callowhill street to Hamilton street; three hundred and ten (310) feet on Third street, from Dock street to Walnut street; one hundred and ninety (190) feet, from Fifth and Chestnut streets into Drexel Building; eighty-two (82) feet from Broad and Locust streets into the Academy of Music; seven hundred and sixty (760) feet, from Sixth and Walnut streets to rear of State House; three hundred and ninety (390) feet on Columbia avenue, from Broad street to Carlisle street; two hundred (200) feet, from Eighth District Station House into Engine No. 26; one hundred and sixty (160) feet in Engine No. 29 to loft; one thousand and forty (1,040) feet on Green street, from Front street to St. John street; one hundred and sixty-three (163) feet, Water and Market streets, into Ridgway House; one thousand and twenty (1,020) feet, from Nineteenth street and Fairmount ave-

nue to Vinyard street; one thousand seven hundred and twenty-nine (1,729) feet, from Twenty-sixth and Poplar streets to Twenty-ninth and Ogden streets; two hundred and forty-three (243) feet cable pole, at Front and Poplar streets; ninety (90) feet cable pole, Front street and Girard avenue; one hundred and seventy-five (175) feet, Thirtieth District Station House, into Engine No. 42; eighty (80) feet, Twelfth street and Fairmount avenue, cable pole; sixty-five (65) feet, Front and Noble streets, cable pole; two hundred and eighty (280) feet, cable pole, Broad and Buttonwood streets; thirty-five (35) feet, Thirty-second District, into Engine No. 40; one hundred and twenty-five (125) feet, Seventeenth District, into Engine No. 24; one hundred (100) feet, cable pole, Carlisle street, below Columbia avenue; one hundred (100) feet, between Brush and Long Distance manhole, Fourth and Chestnut streets; thirty-five (35) feet, between Brush and Long Distance manholes, Fourth and Spruce streets; thirty (30) feet, between Brush and Long Distance manholes, Tenth and Spruce streets; eighteen (18) feet, between City and Long Distance manhole, Fifteenth and Market streets; one hundred and twenty (120) feet, between City and Long Distance manhole, Broad and York streets; thirty-eight (38) feet, between City and Long Distance manhole, Broad and Arch streets; thirty-five (35) feet, between City and Brush manhole, Second and Spruce streets; thirty (30) feet, between City and Brush manhole, Broad and Spruce streets.

Ten conductor No. 18 B. & S. gauge has been laid as follows:

One hundred and fifteen (115) feet cable pole, at Twenty-eighth District; two hundred and seventy-five (275) feet Frankford creek; four hundred and seventy-five (475) feet, Eighteenth and Callowhill streets, into Ninth Dis-

trict Sub-Station; one hundred and sixty (160) feet cable pole, Thirteenth District.

Ten conductor No. 16 B. & S. gauge has been laid as follows:

One hundred and fifteen (115) feet cable pole, at Twenty-eighth District; two hundred and eighty-five (285) feet, Frankford creek; one hundred and sixty (160) feet cable pole, Thirtieth District; 290 feet cable pole, Germantown and Sedgley avenues.

Nine conductor cable, composed of 5 No. 16 and 4 No. 18 B. & S. gauge has been located as follows:

Six hundred and twenty-five (625) feet on Third street, from Vine to Callowhill street; one thousand nine hundred and twenty-nine (1,929) feet, from Eighteenth and Spruce streets to Nineteenth and Waverly streets.

In erecting fire boxes seven thousand three hundred and ninety-three (7,393) feet of 2 and 3 conductor No. 16 B. & S. gauge cable has been used; in erecting patrol boxes six thousand five hundred and eight (6,508) feet of 4 conductor, composed of 2 No. 16 and 2 No. 18 B. & S. gauge cable has been used.

Eghty-five (85) signal boxes have been connected with underground cables during the year; a total of two hundred and thirty-nine (239) now in that position.

Sixty-seven (67) patrol box posts have been connected with underground wires during the year, and located in the following districts:

Third District, twelve (12) boxes; Fifth District, eleven (11) boxes; Ninth District, eighteen (18) boxes; Sixteenth District, six (6) boxes; Nineteenth District, fourteen (14) boxes; Twenty-third District, six (6) boxes; a total of one hundred and six (106) patrol boxes on underground wires.

Four (4) signal box posts, the boxes on which were connected with underground cables were damaged during the year, three (3) of which, Front and Arch streets, Front

and Dock streets and Fortieth and Market streets, were restored at the expense of the City, as the party causing the damage was not apprehended; and one at Fourth and South streets damaged by a wagon being forced against it by a trolley car, at the expense of the trolley company.

At the request of the Building Commission, this Bureau has laid and connected cables in the City Hall, as follows:

Twenty-seven thousand seven hundred and forty (27,740) feet on the fifth floor; forty thousand nine hundred and seventy-seven (40,977) feet on the seventh floor, and the rooms of the Board of Education on second floor and City Solicitor's office, on fourth floor, equipped.

The facilities offered by the system of underground cables as at present constituted, permitted our placing a part of thirty (30) of our circuits between Callowhill street and Girard avenue underground, as follows:

Fire Signal Nos. 3, 5, 7, 9, 10, 11, 12, 14 (entirely underground), 17, 18, 20; Alarm Circuit Nos. 2, 6, 9; Fire Telephone Nos. 4, 6, 9, 11, 12, 13, 14; five (5) new talking circuits, completing the independent telephone system to engine houses were added and the east, northwest and north police were extended farther on underground wires.

Two hundred and three (203) junction boxes were used in connecting the cables laid during the year.

Telegraph and telephone cables were renewed as follows:

One thousand one hundred and sixty-four (1,164) feet 25 conductor No. 16 B. & S. gauge, east side of Broad street, from Susquehanna avenue to York street; four hundred and sixty (460) feet 24 conductors, 14 No. 16 and 10 No. 18 B. &. S. gauge on Callowhill street, between Eighth and Ninth streets; five hundred and sixty-seven (567) feet on Broad street, from Green to Spring Garden street, 31 No. 16 B. & S. gauge, and five hundred and sixty-seven (567) feet on Broad street, Green to Spring

Garden streets; 36 conductors, 18 No. 16 and 18 No. 18: one thousand four hundred and sixty-nine (1,469) feet, Girard avenue, Twenty-ninth to Thirty-first street, 24 conductor, 14 No. 16 and 10 No. 18 B. & S. gauge; four hundred and seventy-one (471) feet, Spruce street, between Sixth and Seventh streets, 42 conductor, 20 No. 16 and 22 No. 18 B. & S. gauge.

In rearranging the cables on Broad street, after the completion of the bridge across the subway, three hundred and fifteen (315) feet of 30 conductor, 18 No. 16 and 12 No. 18 B. & S. gauge; three hundred and fifteen (315) feet of 31 conductor, No. 16 B. & S. gauge, and seven hundred and seventy (770) feet of 26 conductor, 26 No. 18 B. & S. gauge were used.

In preparing for the connections made necessary by the demands made on us for signal stations during the Peace Jubilee Celebration, forty (40) feet of two (2) wire cable was used at Juniper and Market streets; fifty-six (56) feet at Broad and Filbert streets; forty (40) feet at Broad and Spring Garden streets; eighty (80) feet at Broad street and Girard avenue; seventy (70) feet at Broad and Chestnut streets; seventy-five (75) feet at Fifth and Chestnut streets; thirty-five (35) fet at Ninth and Chestnut streets, and thirty (30) feet of four (4) wire at Ninth and Market streets.

Electric Light Cables.

Six thousand one hundred and eighty (6,180) feet of No. 4 B. & S. gauge electric light cable has been laid on the east side of Broad street, between Christian street and Passyunk avenue; with 24-30 feet iron poles and 24-15 foot mast arms; current was turned on eighteen (18) of these lights on July 1st, the six (6) remaining, on December 7th.

On May 28th, sixteen (16) electric lights on the south

side of Columbia avenue, between Broad street and Ridge avenue, were transferred from the overhead to underground cables and the poles and wires removed.

Electric light posts connected with underground cables were moved on account of radius curbs as follows:

Eighteenth and Diamond streets, Broad and Chestnut streets, Twelfth street and Girard avenue.

Three thousand six hundred and eighty-five (3,685) feet of electric light cable was used in making repairs during 1898.

Six (6) ornamental iron electric light posts were erected; three (3) on each side of the Broad street bridge, crossing the Reading Railway Subway; eight hundred and thirty-five (835) feet of electric light cable laid in a wood trough on each side of the bridge between the guard rails, and enclosed by the panels, were used in connecting these lamps.

The lamp formerly located at southeast corner of Broad and Callowhill streets was moved to the northeast corner and the one at Willow street to the southeast corner.

The electric light at the southwest corner of Twenty-third and Spring Garden streets has been placed on an air line temporarily, and will be restored to its original position when the new curb is in position.

Police Telegraph.

The yearly increase in the number of messages transmitted over the lines of the Police Telegraph is clearly indicative of the important position it holds in the operations of the Bureau of Police, the Courts, the Detective Bureau, the Coroner's Office, the Bureau of Health, other Departments and Bureaus, and for the general public, who when seeking information of lost friends, stray teams or animals, stolen property, etc., etc., resort to the police station and utilize the service there provided for the attainment, by its wires, of such information.

It also becomes an aid to the Bureau of Fire, in the receiving and transmitting of alarms of fire, and for obtaining information by its circuits, relative to the same.

The new east police wire has been placed underground, on Market street, Front street and Girard avenue to Frankford road, with loop at Front street and Fairmount avenue to Seventh District.

The northwest police has been placed underground, west on Market street, from City Hall to Twenty-third street; thence to Callowhill street, to Twenty-fifth street, to Fairmount avenue, with loop to Twenty-third street; thence to Brown street, to Twenty-sixth street, to Girard avenue, to Ridge avenue, to Lehigh avenue, thence overhead by old route.

The north police wire has been placed underground, east on Market street to Tenth street, north on Tenth street to Girard avenue, with loop at Buttonwood street to Eighth District, and north on Tenth street, Girard avenue to Thompson street to Twelfth District, west on Girard avenue to Broad street, to Germantown avenue, with loop at Lehigh avenue to Twenty-second District Station House; thence overhead by old route.

No additions have been made to the number of instruments on these circuits; the Eleventh District instrument was moved from its old position to one better fitted and more convenient for the proper workings of the service.

In taking advantage of the facilities offered by our system of cables, the east, northwest and north police were further extended underground, all stations lying south of Girard avenue being placed on conductors laid in underground conduits.

Police Signal and Telephone.

This is one of the most active services requiring the care and attention of the Bureau, each box being operative

at least once an hour every day in the year, necessarily require close scrutiny and watchfulness in maintaining effective service. Every advantage is taken by this Bureau to improve and better this service, which is so largely instrumental in maintaining the discipline of the police force; a number of the circuits in the centre of the City have been placed underground; many of the districts in which no conduits nor cables have been laid have been equipped with four (4) wires placed on poles overhead, and all boxes, batteries, wires and instruments in each district have been overhauled and kept in perfect working condition.

In addition to the Fourth, Sixth and Twentieth Districts, whose circuits were placed underground in 1897; the Third, Fifth, Ninth and Nineteenth Districts have received a similar treatment, and are now in a position to fulfill all that is required of them, without regard to the elements; the officers in charge of the districts so equipped, express themselves as thoroughly well pleased with the service.

Two (2) of the Police Districts that have conduits and cables laid within their limits have been equipped with the four (4) wire system, and as far as these substructures exist, have been placed underground; those so equipped were the Sixteenth and Twenty-third Districts.

Eight (8) districts outside of the territory occupied by underground wires, have been equipped with what we term the four (4) wire system, that is, two (2) wires are given over to the talking service alone and a circuit is run around the district to take in the signal or box service. These districts have been materially benefited by its introduction.

They are as follows: Thirteenth, Fifteenth, Twenty-second, Twenty-fifth, Twenty-seventh, Twenty-eighth, Twenty-ninth, Thirtieth.

Sixty-seven (67) patrol stations have been placed on iron

posts, transferred from the overhead to the underground system of wires, as follows:

Third District, twelve (12) boxes; Fifth District, eleven (11) boxes; Ninth District, eighteen (18) boxes; Sixteenth District, six (6) boxes; Nineteenth District, fourteen (14) boxes; Twenty-third District, six (6) boxes. The entire patrol system of the Third, Fourth, Fifth, Sixth, Nineteenth and Twentieth Districts have been placed on underground wires.

A new police district, the Thirty-second, with central station at Sixty-fifth and Woodland avenue, was fitted with a complete central office outfit, and eleven (11) stations taken from the Twenty-first District.

The West Philadelphia Bank, 3938 Market street, on Twenty-first District patrol, and the United States Mint, Juniper and Chestnut streets, on the Nineteenth District patrol, were connected, at the usual yearly rental.

On request of the Treasurer, the office of the City Treasury was, by the introductionof a patrol box, connected with the Twentieth District patrol circuit.

To insure the presence of a police officer at regular intervals in the neighborhood of the newly restored Independence Hall, a patrol box, connected with the Third Police District, was placed at the rear of the main entrance.

Accompanying the intrduction of the new police patrol boxes, was the equipping of the Eighteenth District entirely with wall boxes and the removal of the booths to the suburban districts.

The central station apparatus at the Eleventh District were, for the better accommodation of the operators, moved across the roll room.

The patrol box on underground post at northwest corner Fifth and Market streets was broken by a team backing into it.

The station houses and the patrol boxes in the Fourth and Fifth Districts were equipped with new telephone receivers and transmitters, purchased by and now the property of the City; the service from the instruments thus equipped is pronounced by those using it, as being first class in every particular; the receivers and transmitters formerly located in these districts have been transferred to other outlying districts.

All posts connected with the underground service supporting patrol boxes have been painted by an Inspector of this Bureau.

Thirty-seven (37) stations were added during the year, as follows:

Third District, two (2); Fourth District, one (1); Fifth District, one (1); Eighth District, two (2); Ninth District, four (4); Twelfth District, two (2); Fourteenth District, two (2); Fifteenth District, three (3); Sixteenth District, three (3); Seventeenth District, two (2); Eighteenth District, two (2); Twenty-second District, five (5); Twenty-third District, two (2); Twenty-sixth District, two (2); Thirtieth District, four (4).

The office of the Penny Saving Fund, in the First District, and the Bank of the Republic, in the Fourth District, who had been using the service at a rental of $100 per year, were discontinued.

There are five hundred and eighty (580) patrol boxes in use at this time, divided among the various districts, as follows:

Patrol.	Police District.	Private Boxes.	Total Boxes.
2	Second,	..	13
3	Third,	1	17
3	Fourth,	..	16
7	Seventh,	..	16
7	Eighth,	..	18
9	Ninth,	1	19
10	Tenth,	..	12

Patrol.	Police District.	Private Boxes.	Total Boxes.
11	Eleventh,	..	14
12	Twelfth,	..	22
13	Thirteenth,	..	16
14	Fourteenth,	3	41
15	Fifteenth,	..	18
15	Twenty-seventh,	..	15
16	Sixteenth,	..	19
17	Seventeenth,	..	22
17	First,	..	12
18	Eighteenth,	..	27
19	Nineteenth,	2	16
19	Fifth,	3	17
20	Twentieth,	1	11
20	Sixth,	2	15
21	Twenty-first,	3	18
22	Tewnty-second,	..	26
22	Twenty-eighth,	..	15
23	Twenty-third,	1	25
24	Twenty-fourth,	..	17
25	Twenty-fifth,	..	25
26	Twenty-sixth,	..	19
29	Twenty-ninth,	..	18
30	Thirtieth,	..	30
21	Thirty-second,	..	11
	Totals,	17	580

Fire Signal and Telephone and Fire Alarm.

Knowing full well the necessity for a quick, accurate, and uninterrupted communication with the Bureau of Fire, the wires of these systems are surrounded with every safe-guard that the state of science will permit of, and are subject to a never ceasing supervision, a test of the alarm circuits being made by the fire operators every twenty minutes, day and night, and at the first sign or indication of trouble, it is immediately ferreted out and removed.

A number of the circuits connected with these systems have been placed underground for part of their length as follows:

No. 1 Alarm Right was continued east on Market street to Front street, north on Front street to Girard avenue,

and east on Girard avenue to Frankford road; the left side of No. 2 Alarm was continued underground from the Sixteenth District to Forty-fourth street and Lancaster avenue; the left side of No. 6 Alarm was continued east on Market street to Front street, south on Front street to cable pole, below Lombard street, thence overhead.

The right side of No. 9 Alarm was continued north on Fourth street to Engine No. 29—Fourth street above Girard avenue. No. 4 Fire Telephone was continued east on Callowhill street to Front street; north on Front street to Girard avenue, east on Girard avenue to Frankford avenue; No. 6 Fire Telephone was continued out Lancaster avenue from Sixteenth District Station House to Forty-fourth street and Lancaster avenue; the right side of No. 9 Fire Telephone was continued to east on Market street to Front street, north on Front street to Girard avenue, and west on Girard avenue from Front street to Fourth street; the left side of No. 9 Fire Telephone was continued east on Market street to Fourth street and north on Fourth street to Engine No. 29, north of Girard avenue; No. 11 Fire Telephone was continued east on Callowhill street to Tenth street and north on Tenth street to Buttonwood street to Engine No. 26; the right side of No. 12 Fire Telephone was continued east on Market street to Front street, north on Front street to Girard avenue, east on Girard avenue to Frankford avenue; the left side of No. 12 Fire Telephone was continued east on Market street to Fourth street, north on Fourth street to Girard avenue, east on Girard avenue to Frankford avenue; a loop was run off No. 14 Fire Telephone east on Vine street between Front street and Delaware avenue and south on Delaware avenue to the Fire boat; talking circuits upon which nothing but receivers and transmitters were connected were completed to Engines Nos. 21, 6, 15, 23, 25, Truck C and Insurance Patrol No. 2, also to Engines Nos. 26, 13, 27,

34, Truck A; also from Broad street and Girard avenue to Engine No. 29, Fourth street and Girard avenue; also to Engines Nos. 45, 35, 12, 39; also to Engines Nos. 40, 41, and Truck F; also to Engines Nos. 3, 10, 46 and Truck E.

The instrument located at Cramp's shipyard for the tug Stokley was removed to the Penn Treaty Wharf. Nos. 3 and 7 alarm were connected together and made one circuit; eight inch alarm gongs were placed in the offices of the United Gas Improvement Company at Frankford, Germantown, Manayunk and West Philadelphia, and one in the operating room of the Bell Telephone Company, 406 Market street; the eight inch gong of the Bureau of Water was, on their removal, placed in their new offices, on the Seventh floor, City Hall; the eight inch gong formerly located at Twenty-sixth and Callowhill streets, in the Hestonville office, was removed to the Mt. Vernon street emergency house, and the gong of Asst. Engineer Meskill changed to his new residence.

No. 8 Alarm was connected into the Twenty-seventh District for test.

Engine No. 21 was re-wired, and all the brass work on the switchboard in the operating room of the Bureau was taken off, cleaned, relacquered and replaced.

Talking circuits were run to Engines Nos. 21, 6, 15, 23, 25, Truck C, and Insurance Patrol No. 2; to Engines Nos. 26, 13, 27, 34, Truck A; to Engines Nos. 45, 35, 13, 39; to 40, 41, Truck F; and Engine No. 29 connected underground from Broad street to Fourth street and Girard avenue.

Fire Signal.

One of the things most to be desired is a greater increase in the number of Fire Signal stations, upon the highways of the City, as it is by these means that the members of

the Bureau of Police, or other persons, on the breaking out of a fire, transmit the alarm quickly.

The past year has been one of unceasing activity with respect to the instruments and wires connected with this service; fifty-one (51) boxes have been added, eighty-five (85) placed on posts connected with underground wires, a total of two hundred and thirty-nine (239) so placed; and eleven (11) circuits placed in whole or part underground, as follows:

Nos. 3, 5, 7, 9, 10, 11, 12, 14, 17, 18, 20, of which No. 14 is entirely underground.

All boxes were painted and overhauled and those equipped with keyless doors were looked after each month. The iron underground signal box posts at Fourth and Arch streets, Fortieth and Market streets and Front and Dock streets, were run into by teams and broken, and replaced at the expense of the City, the person doing the damage not having been apprehended; the trolley company being responsible for the damage to the post at Fourth and South streets, by forcing a wagon against it, withstood all damages. A signal box was placed in rear of Independence Hall; the signal box at the ferry house, Delaware avenue and Market street, was changed from the old to the new ferry house; No. 3 Signal was connected into Third District; No. 11 into the Tenth District; No. 12 into the Twelfth District; No. 17 into Thirtieth District for test.

Telephones.

While I probably speak without a perfect knowledge of the facts, I feel fully justified in saying that there is no municipality in the country with an office resembling the Electrical Bureau of this City, whose telephone system is so largely extended, and whose operations are so extensive. There is no Department, Bureau nor office of whatever nature in the embrace of the City government which is

not in direct touch with this Bureau, by means of its numerous circuits and the many telephone instruments under its care and jurisdiction. The perfected telephone instrument of to-day has so entered into the private and public life of the official and citizen of a great city, that when deprived of its use much discontent is manifested and inconvenience experienced. To meet the demand made by all using the "phone" for uninterupted service, the resources of private corporations and municipal officers, having such matters in charge are taxed to the utmost. In this City with moneys made available by appropriation, every effort is made to surround the telephone circuits with such safeguards as will permit of constant communication, and to keep the instruments in a condition that will insure a service of the highest efficiency.

Some idea of the importance of the telephone in a business way, may be derived from the showing made by the number of messages sent and received and the calls made over the telephone switchboard in the office of the Electrical Bureau during the past year.

Thirty-three thousand five hundred and eighty-two (33,582) messages were received and transmitted, and a total of nine hundred and thirty-seven thousand nine hundred and sixty-four (937,964) messages and connections handled On the wires of the patrol system, five million two hundred and seven thousand five hundred and fifty-three (5,207,553) calls were made for the purposes incidental to police work.

There are in the service of the City to-day nine hundred and thirty-two (932) telephones, connecting the various Departments, Bureaus, offices, fire houses with the central and police stations with patrol stations on the street, etc, etc.

The maintenance of so large a number of instruments necessarily involves a great amount of labor. Additional

connections to the switchboard in the operating room of the Bureau were made from office of City Ice Boats, Law Library, Room 600, City Hall; Bureau of Water, Room 196, City Hall; Bureau of Lighting, Room 391 City Hall; private desk of City Treasurer; private desk of the Chief of Detectives; office of Park Commission; two (2) rooms temporarily occupied by the Peace Jubilee Committee; the Chief of the Bureau of Water; the Superintendent of the Bureau of Water and many other offices of this Bureau, on their removal to City Hall; the clock room in the clock tower; offices of the President of the Bureau of Charities and Correction; Room 477, City Hall, Sheriff's suite; Second Regiment Armory.

The sets of instruments connecting the residences of the Chief Clerk of Select Council with extension bell, and the Chief Medical Inspector of the Bureau of Health with the Electrical Bureau were transferred by reason of their change of residence.

The set of telephones formerly located in the office of Councilman Chew, was on his removal from 225 South Sixth street, transferred to his new office 505 Chestnut street, and eventually on his retirement from Councils, disconnected altogether and transferred to the sub-office of the Bureau of Surveys, Delaware avenue above Chestnut street.

The telephones located in the residences of the Port Physician, the Chief Medical Inspector and the Resident Physician of the Municipal Hospital, were placed on one circuit with bridged connections.

The set of telephones connecting the office of Committing Magistrate South was, on his change of location, transferred from 114 North Twelfth street to 1331 Arch street.

A number of instruments not adapted to the conveniences of the offices in which they were placed, were moved

to places more suitable, included among them were Court of Common Pleas, from Room No. 256 to 258; Bureau of Health, from Room No. 708 to 715; set at Independence Hall included two extension bells; Presbyterian Hospital; Third Regiment Armory.

In a number of instances when several instruments were working in series on a circuit, the loops were bridged and the magnetoes replaced with instruments to suit that service.

The circuit connecting the patrol stable with the Twenty-third District Station House was made metallic, greatly benefiting this service.

The armories of the First and Second Regiments, the City Troop and State Fencibles, that were originally equipped with sets containing the granular buttons transmitters, were during the early days of the war with Spain equipped with solid back transmitters, fitting them for long distance work, enabling them to talk directly to Harrisburg, Washington, and such other points as occasion might require.

The 'phone connected with the police tug Stokley was transferred to Cramp's shipyard, but later in the year the occupation of permanent quarters provided at Penn Treaty Park Wharf again necessitated their removal. The high resistance extension bell was placed in the Armory of the City Troop.

A number of new talking circuits connecting the engine houses of the Bureau of Fire were completed, greatly to their benefit.

With a view of ascertaining the merits of the various telephone instruments offered for sale, a test was made of three makes that gave promise and one finally selected that gave every indication of a simple, yet perfect instrument.

Thirty-six (36) patrol street stations constituting the

Fourth and Fifth Districts were equipped with these instruments, the service given by them being the best, of other makes of instruments; two one-half sets were placed on fire telephone circuits at Holmesburg and Tacony; two desk sets connecting to rooms in the Electrical Bureau, and one full set each in the Nineteenth and Sixteenth District Patrol Stables, connecting with the police station houses. The thirty-six (36) half sets leased from the Bell Co. that were taken from the Fourth and Fifth Districts were scattered about in the various patrol districts, wherein new boxes had been placed. Immediately on the transfer of the property of the Bureau of Gas to The United Gas Improvement Co. all connections with the switchboard in the Electrical Bureau formerly had by the Bureau of Gas were severed.

A full set of telephones connecting with the Roxborough and Incline Plane Railway Co.'s car barns at Ridge and Port Royal avenues, and Shawmont was placed in the Roxborough Police Station; through this service policemen are enabled to communicate from these points to the station house and to provide for the possible necessity of transmitting an alarm of fire. A number has been given the car barns at Ridge and Port Royal avenues.

About a week prior to the celebration of the Peace Jubilee, October 26th, 27th and 28th, we were called upon to arrange and perfect a method of communication between points on the route of the parades that would give the officers of the Department, the Peace Jubilee Committee and the marshals, aides, etc., etc., a perfect command of the conditions incident to so great a demonstration. Once before during the celebration of the signing of the Constitution in 1887 we were called on to perform the same service, and by means of the underground electric light cable and the use of Morse operators and instruments five (5) stations were established. This answered

very satisfactorily at that time, but with our present facilities, better results were accomplished; five (5) complete underground metallic circuits, four (4) with four (4) stations each, and one (1) with three (3), were connected to the switchboard in the operating room of the Electrical Bureau, at City Hall, as follows:

Circuit No. 1.

Station No. 1.—Northwest corner Broad and McKean streets.

Station No. 2.—Southwest corner Broad and Reed streets.

Station No. 3.—Southwest corner Broad street and Washington avenue.

Station No. 4.—Southwest corner Broad and Lombard streets.

Circuit No. 2.

Station No. 5.—Northeast corner Broad and Walnut streets, Grand Stand.

Station No. 6.—Southwest corner Broad and Chestnut streets.

Station No. 7.—Southwest corner Ninth and Chestnut streets.

Station No. 8.—Southwest corner Fifth and Chestnut streets.

Circuit No. 3.

Station No. 9.—Northwest corner Fifth and Market streets.

Station No. 10.—Northeast corner Ninth and Market streets.

Station No. 11.—Northeast corner Juniper and Market streets.

Station No. 12.—Northeast corner Broad and Filbert streets.

Circuit No. 4.

Station No. 13.—Northeast corner Broad and Race streets.

Station No. 14.—Southwest corner Broad and Spring Garden streets.

Station No. 15.—Northwest corner Broad street and Fairmount avenue.

Station No. 16.—Northeast corner Broad street and Girard avenue.

Circuit No. 5.

Station No. 17.—Southeast corner Broad street and Columbia avenue.

Station No. 18.—Southeast corner Broad and Diamond streets.

Station No. 19.—East side of Broad street, below York street, Reviewing Stand.

At each of these locations the iron electric light pole served as a support for a rail platform, placed nine (9) feet above the surface of the sidewalk.

On each of these stands was placed a set of telephones of the most approved pattern with an operator or other employee of the Electrical Bureau, and a few house sergeants selected for their fitness in the use of the telephone to operate them. A code of signals and special instructions were handed each several days before the procession, that they might perfect themselves in them. The service given by these men proved how thoroughly they familiarized themselves with the work and how readily they adapted themselves to the situation. Megaphones were furnished each of the men on the stands, who were instructed in their use and were required to furnish those in their neighborhood with such details of the day as would prove interesting. Anticipating the possibility of wires

breaking and falling across the line of parade or in case of need in other directions, several of the linemen of the Bureau were placed with the operators on the stands and were thus in communication with all parts of the City and line, and with the office of this Bureau, in case they were required.

These arrangements were made with such care and the details so minutely drawn that the service rendered left nothing to be desired; messages were transmitted over these circuits for the two days almost continuously and without interruption and no break nor misunderstanding marred the occasion. The stands of this service were the points at which were gathered the police officials, the ambulances, the medical corps and others equally interested.

The courtesy of the officers of the Bell Telephone Co. of this City, who kindly loaned this Bureau the instruments to equip these stations, contributed in a great measure toward this success; the twenty (20) sets of telephones being entirely new and of the latest and most improved pattern.

Trolley.

During the year frequent and exhaustive tests for electrolysis were made of the cables under the care of this Bureau, and other substructures belonging to the City, by an Inspector of this Bureau, and where positive or faulty condition existed, the Railway Company was at once notified, and the trouble remedied, either by bonding to the trolley return leads, or by the laying of larger returns by the company.

Through the indefatigable efforts of the company to remove the cause of complaint from electrolysis, caused by their escaping currents, they have been put to immense expense in rebonding the joints between the rails with cast weld joints, large gauge bond wires firmly connected under tons of hydraulic pressure, and the laying of heavy

solid copper cables, across bridges, and intersections where an escape of current was manifest.

The Union Traction Company have, to insure a return of current, bonded in various sections of the City three hundred and fifty (350) renewed crossing and curves and also new nine inch rails, on

Twenty-sixth street, between Perot street and Girard avenue.

Perot street, between Twenty-fifth and Twenty-sixth streets.

Indiana avenue, between Sixth and Eighth streets.

Eighth street, between Indiana avenue and Germantown avenue.

Vine street, between Delaware avenue and Third street.

Front street, between Vine and Callowhill streets.

Callowhill street, between Front and Fourth street.

Callowhill street, between Broad and Sixteenth streets.

East Norris street, between East Thompson street and Girard avenue.

Chelten avenue, between Stenton avenue and York road.

Germantown avenue, between Hillcrest avenue and County Line.

Hunting Park avenue, between Germantown avenue and York road.

Fifth street, between Rising Sun lane and Wyoming avenue.

Front street, between York and Cambria streets.

Broad street, between Porter street and League Island, with an improved bond placed in the tram of the rail in a tapered hole and compressed by a hydraulic press of forty ton pressure. This bond is of a large carrying capacity and proves to be the best applied for the purpose, up to the present time. Six thousand of this improved bond were connected to the old rails in addition to those already there on,

Germantown avenue, between Bethlehem pike and Broad street.

Arch street, between Front and Tenth streets.

Twenty-fifth street, between Fairmount avenue and Poplar street.

Broad street, between Indiana and Erie avenues.

Four hundred (400) heavy cross bonds connecting the rails together and let into manholes and to negative cables have been added on,

Germantown avenue, between Bethlehem pike and Fourth street.

Fourth street, between Germantown avenue and Brown street.

Brown street, between Third and Beach streets.

Beach street, between Fairmount avenue and Poplar street.

Thirty-third and Spring Garden streets.

Thirty-sixth and Spring Garden streets.

Thirty-seventh and Haverford streets.

Fortieth streeet and Fairmount avenue.

Cast welded joints and heavy cross bonds have been added on,

Twelfth street, betweenn Snyder avenue and Wharton street.

Thirteenth street, between South and Cumberland streets.

Fifteenth street, between South and Cumberland streets.

Wayne street, between Berkley and Johnson streets.

Lancaster avenue, between Market and Forty-fourth streets, and on the new line on Federal street, between Front and Ninth streets; Ellsworth street, between Seventeenth and Twenty-seventh streets; Twenty-seventh street, between Ellsworth and Wharton streets; Wharton street,

between Front and Twenty-seventh streets, and Front street, between Federal and Wharton streets.

A heavy cable has been placed under steam railroad crossings where bonds cannot be maintained, and connected to ends of the nine-inch rails, at Second, Third, Sixth, Ninth, Eleventh and Willow streets; Front and Green streets; Front street and Fairmount avenue; Front and Brown streets; Tenth street and Philadelphia and Reading Railway (north of Diamond street); Eleventh street and Philadelphia and Reading Railway (north of Susquehanna avenue); Susquehanna avenue and the Philadelphia and Reading Railway (east of Eleventh street); Beach and Canal streets; Twenty-fifth and Ellsworth streets; Twenty-fifth and Wharton streets; Seventeenth street and Washington avenue; Fifteenth street and Washington avenue; Fifteenth and Carpenter streets.

The bridges across the Pennsylvania avenue Subway being completed at Fifteenth, Seventeenth, Eighteenth, Nineteenth and Twentieth streets, and there being but a six-inch rail to take the place of the former nine-inch rail at these points: a $\frac{3}{4}$-inch solid copper wire has been laid between the tracks, the rails bonded and cross-bonded and connected to this wire at every joint; the wire in turn being connected to the end of the nine-inch rail at each end of the bridges. This wire is added to make up the deficiency in carrying capacity between the 6 and 9-inch rails.

On February 1st, the Union Traction Company assumed the operation of the lines of the Hestonville, Mantua and Fairmount Passenger Railway Company, closing the power house of the latter company, and feeding their lines from the power houses at Thirteenth and Mt. Vernon streets and Thirty-third and Market streets.

Provisions were made for the return of current by the addition of negative cables as follows:

One 750,000 C. M. cable on Lancaster avenue, between Market and Forty-fifth streets.

One 1,000,000 C. M. cable Thirty-third street, between Lancaster avenue and power house on Market street.

One 500,000 C. M. cable Thirty-third street, between Spring Garden street and power house at Market street.

And connecting the return cables together at,

Thirty-sixth and Spring Garden streets; Thirty-third and Spring Garden streets; Lancaster avenue and Spring Garden street; Fortieth and Haverford streets; Twelfth and Race streets; Twelfth and Vine streets; Twelfth and Arch streets, and Fifteenth and Arch streets.

The Union Traction Company have taken down over eleven (11) miles of trolley wire, of which seven and one-quarter (7¼) miles was contained in the Hestonville, Mantua and Fairmount Passenger Railway Company's system, each company having its separate wires previous to the Union Traction Company assuming the control.

They have also renewed thirty (30) miles of trolley wire, erecting No. 00 wire in place of No. 0 worn thin on a number of streets.

Curves and weak spots are constantly watched and the wire renewed as it becomes worn thin.

The trolley poles between the double line of tracks on Pulaski avenue, north of Hunting Park avenue and on Wayne street, north of Wayne Junction, owing to the close proximity to the side of the car, have been the cause of much solicitude on the part of the officials of the Traction Company ,and a constant menace to life and limb of those using their cars. The danger to any one accidentally exposing themselves beyond the side of the car, facing these poles has always been apparent.

A short time ago the company decided, on their removal and with the consent of the City authorities, a line of poles

was placed on either side of the street, inside the curb line and the centre line of poles removed.

They have also taken down two hundred and fourteen (214) poles, erected and not used, on a number of streets principally on account of abandoning them for railway purposes, as follows:

Forty-two on Sedgley avenue, between Ridge and Montgomery avenues, and Montgomery avenue, between Sedgley avenue and Thirty-scond street.

Twenty-six on Twenty-fourth street, between Callowhill street and Fairmount avenue.

Seventeen on Thirty-fifth street, between Wallace and Mantua avenue.

Fifteen on Indiana avenue, between Eighth street and Germantown avenue.

Thirty-eight on Front street, between Market and Vine streets, and the balance scattering.

One hundred and twenty-four (124) trolley poles were reset of which, seventy-six (76) were on the new extension of Chelten avenue, between Stenton avenue and York road, the streets having been widened after the poles were erected.

The Manayunk and Roxborough Incline Plane Railway Company assumed the operation of the Wissahickon Electric Passenger Railway Company, closing the power house of the latter company at Wissahickon, both lines feeding from the power house at Shawmont.

Ample provisions were made for the return current from the Wissahickon line at Ridge and Leverington avenues, tests showing that the current is returning by rail and return wires to Shawmont power house.

The Holmesburg, Tacony and Frankford Electric Railway Company extended their tracks and wires on Rhawn street under the new bridge built to carry the Pennsyl-

vania Railroad tracks over Rhawn street at Holmesburg Junction.

The Southwestern Street Railway now in course of construction laid a double track on Jackson street, between Third street and Moyamensing avenue; on Moyamensing avenue to Penrose Ferry road, and on Penrose Ferry road to the Schuylkill river and about two miles of single track on Island road north of the County line. The poles are up and the wires now being strung east of the Schuylkill river.

Located trolley poles as follows:

Union Traction Company	348
Southwestern Street Railway Company	450
Total	798

Frequent inspections were made by an Inspector of the Bureau, of the overhead construction of all trolley lines. He also located guard wires where necessary, which were erected on notice from this Bureau.

The motor and electrical appliances on the draw bridge at Bridesburg supplied with current from the trolley wires has been visited and inspected, at least, once each month and found to be in a very satisfactory condition.

The following lines and extensions were put in operation:

On Bridge street, between Thompson street and State road, January 22d.

On Broad street, between Porter street and League Island, March 13th.

On Rhawn street, under Pennsylvania Railroad, at Holmesburg Junction, May 30th.

On Wood street, Thirteenth to Twelfth, Twelfth to Spring Garden to Thirteenth (temporary) streets, August 27th.

On Germantown avenue, between Hillcrest avenue and the County line, August 27th.

On East Norris street, between Thompson street and Girard avenue, December 15th.

On Federal, Wharton and Ellsworth streets, December 15th.

Estimate of Cost Made for the Establishment of an Electrict Light Plant of 2,000 Lamp Capacity.

In accordance with a resolution of Common Council of date September 16, 1898, that the Director of the Department of Public Safety be, and is hereby requested to prepare and submit to the Common Council, an estimate of the cost of establishing a Municipal Electric Light Plant of 2,000 arc light capacity, said plant to be located in that part of the City containing the largest mileage of underground conduits.

We have prepared and forwarded to you an estimate covering the territory between Poplar and South streets, and the Delaware and Schuylkill rivers.

Electric Lighting.

At the close of the year 1898 there were seven thousand and fourteen (7014) lamps maintained at public expense, an increase of twenty-eight (28) over 1897. Fifty (50) by the Girard Estate; eighty (80) are lighted free by the electric light companies under ordinance, and three (3) free on Girard avenue bridge by the Traction Company; a total of seven thousand one hundred and forty-seven (7147) lighted on the City highways.

There are seven hundred and fifty-three (753) lamps on the City's underground service; twenty-four (24) of which are furnished by the Girard estate, and two hundred and thirty-two (232) on cables laid by the electric light companies; a total on underground cable of nine hundred and

eighty-five (985), an increase of forty-five (45) on City cables, and none on cable owned by the electric lighting companies.

There were eleven thousand three hundred and forty-seven (11,347) lamps deducted from the bills of the various companies during the year for failure to comply with the provisions of their contract, at 32.61 cents, the average per lamp per night, $3,700.25 remained in the treasury from the deductions.

Deduced from the tests taken by Inspectors of this Bureau during the year, an amperage of 9.34 was obtained; numerous tests of lamps appearing faulty were taken and where defective, were ordered changed.

The following iron poles were moved on account of radius curbs:

Eighteenth street and Washington avenue; Twentieth and Federal streets; Twelfth street and Girard avenue; Royer and Goodwin streets; Twenty-second and Venango streets; Eighteenth and Diamond streets; Second and Tioga streets; Broad and Chestnut streets; Fortieth and Chestnut streets.

The following additional iron posts were erected for electric lighting:

Girard avenue and Oxford street; and 15 foot arm; Thirteenth street and Susquehanna avenue, and 15 foot arm; Sixth and Oxford streets; Forty-second and Leidy avenue and 18 foot arm; Forty-ninth street and Cedar avenue and 15 foot arm; and 13-15 foot and 6-12 foot arms were placed on the iron poles on south side Columbia avenue, from Broad to Twenty-third streets.

The following stations were wired by this Bureau for incandescent lighting during the year, viz:

First District Police Station	110 lamps.
Second District Police Station	106 "
Second District Patrol House	22 "

Sixteenth District Police Station	123	lamps.
Sixteenth District Patrol House	19	"
Sixteenth District Stable	22	"
Seventeenth District Police Station	118	"
Seventeenth District Patrol House	31	"
Twenty-fifth District Police Station	75	"
Twenty-seventh District Police Station	96	"
Twenty-seventh District Stable	25	"
No. 5 Engine House	57	"
No. 8 Engine House	91	"
No. 10 Engine House	75	"
No. 24 Engine House	86	"
No. 38 Engine House	65	"

A total of fifteen (15) stations and one thousand and forty-six (1,046) lamps, a grand total of sixty-four (64) stations and three thousand five hundred and eleven (3.511) lamps lit free by the electric lighting companies under ordinance.

Additions to and alterations from the original instalment were made at the Eleventh, Eighteenth, Twenty-first, Twenty-second, Twenty-third, Twenty-fourth, Twenty-ninth and Thirty-second Districts and Engine Nos. 15, 16, 28 and Truck F.

Six (6) stations in the heart of the City have been wired by this Bureau preparatory to lighting, but owing to the limited appropriations for the purchase of current, it was thought best to use the money for wiring and equipping those stations where current under ordinance was free; these stations have been thoroughly quipped and as enumerated above, are being lit by the various companies, the proceeds of such appropriations as may be secured in future may be devoted to lighting these stations in the territory where the electrical companies are not required to furnish current free.

The following list will show the stations being lit, by whom wired, by whom lit, and the number of the lamps:

Lighted by Electricity to January 1, 1899.

	No. of Lamps.	By whom Wired.	Columbia.	Diamond.	Edison.	Germantown.	Kensington.	Manufacturers.	Northern.	Powelton	Southern.	Suburban.	West End.
1st Dist.....	110	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	110		
2d Dist.....	106	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	106		
2d, Patrol.....	22	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	... ..	22		
7th Dist.....	95	Northern	...	.....	...	.....	.....	.....	95				
7th, Patrol...	12	Northern	...	.....	..	.....	.....	.....	12				
10th Dist.....	76	Northern	...	.....	...	.....	.....	.....	76				
11th Dist.....	114	Kensington	...	.....	...	.....	114						
12th Dist.....	67	Northern.....	...	.....	...	.....	.....	.....	67				
12th, Patrol...	20	Northern	...	.....	...	.....	.....	.....	20				
14th Dist.....	63	Electrical Bureau....	...	.....,	...	63							
14th, Patrol...	12	Electrical Bureau....	...	.....	..	12							
14th, Stable....	14	Electrical Bureau....	...	.....	...	14							
15th Dist..... .	85	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	.....	85	
15th, Patrol ..	23	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	.....	23	
15th, Stable....	14	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	.....	14	
16th Dist.....	123	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	123			
16th, Patrol...	19	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	19			
16th, Stable....	22	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	22			
17th Dist.....	118	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	118		
17th, Patrol...	81	Electrical Bureau. .	...	.....	...	.....	.....	.....	.....	.....	81		
18th Dist.....	111	Manufacturers' Co...	..	.....	...	... ..	.....	111					
18th, Patrol...	7	Manufacturers' Co...	...	.....	..	.....	.....	7					
21st Dist.....	91	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	91			
21st, Patrol....	24	Electrical Bureau....	...	.....	...	.... .	.....	.....	.....	24			
21st, Stable.....	8	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	8			
22d Dist.....	75	Manufacturers' Co...	...	.....	...	.....	.....	75					
23d Dist.....	55	Columbia and Electrical Bureau.....	55										
24th Dist.....	65	Manufacturers' Co...	...	.....	...	.....	.....	65					
25th Dist..... ..	78	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	78		
27th Dist.....	96	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	.....	96	
27th, Stable....	25	Electrical Bureau....	...	.....	...	.....	.....	.....	.....	.....	.....	25	

Lighted by Electricity to January 1, 1899—Continued.

	No. of Lamps.	By whom Wired.	Columbia.	Diamond.	Edison.	Germantown.	Kensington.	Manufacturers.	Northern.	Powelton.	Southern.	Suburban.	West End.
Holmesburg...	27	Electrical Bureau....										27	
28th Dist.....	89	Diamond.....		89									
29th Dist.....	82	Electrical Bureau ..								82			
29th, Patrol...	13	Electrical Bureau....								13			
29th, Stable....	11	Electrical Bureau....								11			
32d Dist.....	61	Electrical Bureau....								61			
32d, Stable.....	4	Electrical Bureau....								4			
Engine No. 2..	65	Northern.....							65				
Engine No. 3..	73	Electrical Bureau....									73		
Engine No. 5..	57	Electrical Bureau....								57			
Engine No. 6..	39	Kensington.....					39						
Engine No. 7..	38	Electrical Bureau....										38	
Engine No. 10.	75	Electrical Bureau....									75		
Engine No. 14.	43	Electrical Bureau....										43	
Engine No. 15.	38	Northern.....							38				
Engine No. 16.	88	Electrical Bureau....								88			
Engine No. 19.	25	Electrical Bureau....				25							
Engine No. 21.	50	Northern.....							50				
Engine No. 24.	86	Electrical Bureau....									86		
Engine No. 27.	43	Columbia.....	43										
Engine No. 28.	40	Manufacturers' Co...						40					
Engine No. 29.	151	Electrical Bureau....							151				
Engine No. 34.	46	Electrical Bureau....											46
Engine No. 38.	65	Electrical Bureau....										65	
Engine No. 40.	53	Electrical Bureau....								53			
Engine No. 41.	43	Electrical Bureau....								43			
Engine No. 45.	96	Electrical Bureau....		96									
Engine No. 46.	56	Electrical Bureau....									56		
Truck F.....	64	Electrical Bureau....								64			
Fox Chase.....	40	Private.....										40	
Fire Headq'rs.	55	Electrical Bureau....			55								

Lighted by Electricity to January 1, 1899—Continued.

	No. of Lamps.	By whom Wired.	Columbia.	Diamond.	Edison.	Germantown.	Kensington.	Manufacturers.	Northern.	Powelton.	Southern.	Suburban.	West End.
Band Stand, Vernon Park.	14	Rewired by Electrical Bureau...	...	.....	...	14							
Total.....	3,134	....	98	185	55	128	153	298	574	763	755	456	46
20th Dist.....	141	Electrical Bureau....											
20th, Patrol...	30	Electrical Bureau....											
Engine No. 8..	91	Electrical Bureau....											
Engine No. 17.	84	Electrical Bureau....	Not lighted; price of current to be decided by a commission.										
Engine No. 20.	41	Private.....											
Engine No. 32.	90	Electrical Bureau....											
Total.	477	.....											

The Twenty-ninth District Police Station, Patrol stables and Engine No. 41 were originally wired for series arc lamps, but the difficulty experienced in its maintenance proved so unsatisfactory that the service was abandoned until such time as the incandescent service was established in that neighborhood; this group of buildings at Sixty-first street and Haverford avenue were rewired and equipped with an incandescent installation for eighty-two (82) lamps, and current secured from the Powelton wires passing that point.

The hose tower at Engine No. 19 was wired for four (4) lamps.

The temporary office of the Bureau of Surveys at Delaware avenue and Chestnut street owing to the march of improvements, in the widening of Delaware avenue was demolished and the Assistant Surveyor and clerks were

moved to 28 South Delaware avenue, which this Bureau wired for incandescent lighting.

The tearing out of the nest of boilers in the hold of the tug Stuart necessitated the removal of all wires, etc., connected with their service; on their restoration, the boat was rewired and placed in good condition.

When the Twenty-third District was originally wired by the Columbia Electric Light Co. the Thompson Houston socket was used for the lamps. Owing to the confusion resulting from an assortment of sockets, it was determined, when the lamps were exhausted, to do away with all sockets but the Edison, and make that the standard; the T. H. lamp became exhausted late in the year and the Twenty-third District was resocketed, the Edison pattern replacing the T. H.

The Manual Repeater in the operating room of this Bureau was wired and fitted up with five (5) sixteen candle power lamps.

As mentioned before, there are several properties belonging to the municipality in the centre of the City that have been wired by the Bureau for incandescent lighting, but in which no free service is required by ordinance; this territory is operated by the Edison Electric Light Company. Relative to the current to be furnished by them, the ordinance requires that three experts shall be appointed, one by the City, one by the company and the third to be selcted by these two, who shall determine the price to be paid.

It will be necessary before attempting to light these stations to have this committee appointed who will set a price on current to be furnished, which will last for the year.

License Returns.

$44,686.50 was paid into the City Treasury by the electric lighting, telegraph and telephone companies, as license charges on poles, wires, etc., for the year 1898.

Moneys Paid to the Receiver of Taxes.

The total amount paid to the Receiver of Taxes from all sources to the credit of this Bureau was $55,931.33, viz:

License charges for the year 1898	$44,686 50
Police Signal and Telephone Service, 1898	1,129 17
Police Signal and Telephone Service, 1897	100 00
Rental of ducts in City conduits	8,300 00
Rental of wires in City cables	613 88
Sale of old material	1,069 78
Miscellaneous	32 00
Total	$55,931 33

Appropriations.

Of the $1,023,007.75 appropriated or transferred to the Bureau for the year 1898, $1,012,463.83 was expended $10,543.92 merged.

Number of Poles, Mileage of Wire, Etc.

According to the returns made by the telegraph, electric light, telephone and street railway companies, there were overhead on the highways of the City exclusive of those along railroad tracks:

17,607 wood poles	Increase of 734 over 1897.
28,371 iron poles in use by Trolley Companies	Increase of 798 over 1897.
6,605 City poles (wood)	Increase of 111 over 1897.
2,188 City poles (iron)	Increase of 32 over 1897.
24 Girard Estate (iron).	
54,795 Total	Increase of 1,685 over 1897.
6,264.40 miles telegraph and telephone wire	Increase of 444.15 over 1897.
1,663.42 miles of electric light wire	Increase of 166.04 over 1897.
1,583.70 miles of City wire	Increase of 50.8 over 1897.
656.80 miles of trolley wire	Increase of 4.46 over 1897.
10,168.32 Total	Increase of 665.45 over 1897.

There are sixteen thousand six hundred and four (16,604) attachments to City poles, being an increase of

two thousand four hundred and sixty-eight (2,468) over 1897, to support four hundred and fifty-two and two one-hundreths (452.02) miles of wires, an increase of fifty-two and forty-four one-hundreths (52.44) miles over 1897.

Poles and Wires Taken Down by the City.

This Bureau has taken down and removed from the streets, one hundred and nineteen (119) poles and one hundred and sixty and thirty-seven one-hundredths (160.37) miles of telegraph and telephone wire belonging to the City and fifty-seven and seventy-one one-hundredths (57.71) miles of foreign wires.

Number of Telegraph Messages.

Five hundred and ninety-seven thousand and five hundred and ninety-three (597,593) messages were transmitted over the circuits of the Police Telegraph instruments during 1898, an increase of one thousand five hundred and fifty (1,550) over 1897.

Operations of Telephone Switchboard.

Nine hundred and thirty-seven thousand nine hundred and sixty-four (937,964) calls, and connections were made and thirty-three thousand five hundred and eighty-two (33,582) messages received and transmitted over the telephone switchboard during the year, an increase of twenty-six thousand two hundred and six (26,206) connections and an increase of two thousand four hundred and eighty-six (2,486) messages.

Number of Alarms of Fire.

Eight hundred and eighteen (818) alarms were transmitted over the wires of the alarm system during the year, of which seven hundred and fifty-five (755) were first alarms; thirty-one (31) second alarms; eighteen (18) third

alarms; seven (7) fourth alarms; four (4) fifth alarms, and three (3) false alarms.

One hundred and six (106) alarms were received from boxes in localities from which alarms had already been transmitted, but were not sent out on the alarm circuits.

Sixteen (16) alarms were given over the circuits of the Pneumatic Fire Alarm Telegraph Company, and transmitted by telephone to the engine company nearest the locality from which they were given.

Number of Calls—Police Signal System.

Five million two hundred and seven thousand five hundred and fifty-three (5,207,553) calls were given over the circuits of the Police Signal and Telephone Service during the year, an increase of one hundred and seventy-two thousand nine hundred and twelve (172,912) over 1897; five million one hundred and fifty-five thousand two hundred and eighty-eight (5,155,288) were telephone calls, forty-seven thousand two hundred and twenty-six (47,226) reports from private institutions, and fifty-two thousand two hundred and sixty-five (52,265) wagon calls.

A summary of the wagon calls shows thirty-two thousand six hundred and eighty-two (32,682) were for the conveyance of prisoners; eight thousand eight hundred and twenty-five (8,825) for the conveyance of injured persons; one thousand two hundred and three (1,203) for the conveyance of officers to and from fires; and nine thousand five hundred and fifty-five (9,555) for miscellaneous work.

Number of Instruments in Use and Owned by the City.

47	Police instruments.
47	Relay and bell magnets on marble bases.
86	Alarm instruments located in engine houses, depots, etc., of which 16 are private.
983	Signal boxes, 58 of which are private and 9 on stages of theatres.

155	Keyless doors.
63	Bell magnets and keys connected with fire signal and telephone service.
32	Police signal and telephone office sets.
324	Police booths.
580	Police patrol signal boxes, of which 238 are wall boxes and 17 are located in banks and other institutions.
932	Telephones.
6,605	Wood poles.
2,188	Iron poles.
1,583.70	Miles of overhead wire.
87.55	Miles of telegraph and telephone cable underground.
2,559.56	Miles of telegraph and telephone conductor underground.
46.20	Miles of electric light cable.
272,450	Feet of underground conduit.
1,887,266	Feet of ducts.
981	Mast arms.
106	Iron patrol box posts.
239	Iron signal box posts.
836	Junction boxes.
725	Manholes.
1	Three dial manual repeater.
1	Four dial manual repeater.
6	Banks of registers, 5 to a bank.
8	Banks of relays, 5 to a bank.
30	Bell magnets on signal box circuits.
1	Telephone switchboard, capacity 325 circuits.
1	Fire alarm switchboard, capacity 100 circuits.
2,950	Cells Callaud battery.
2,270	Cells Leclanche dry, and other open circuit batteries.
1	Motor dynamo for telephone switchboard work.
1	Complete set Thompson Reflecting Galvanometer.
1	Bunell Galvonometer and Wheatstone Bridge.
1	Bradley Galvanometer and Rheostat.
1	Weston direct and alternating current volt meter.
2	Weston direct current volt meters.
1	Weston direct current milli volt meter.
3	Weston direct current ammeters.
1	Weston direct current milli ammeter.
1	Weston multiplier for direct current volt meter.

Construction, Maintenance and Supervision.

Few men in public life, in the administration of the affairs of an office, of which they may be the executive head, have the pleasure to be supported in its administration by so competent and capable a body of men, as is the Chief of this Bureau.

With few exceptions, the officers, clerks and employees generally, are faithful, efficient, and thorough masters of the various systems under our control.

It gives me great pleasure to express my appreciation of their intelligent conception of, and the close attention to details, which so materially adds to the successful administration of so large an institution as is here represented.

The first Assistant Manager, two Inspectors, two electrical plumbers and two assistant plumbers, and a corps of emergency men, have under the direction of the Chief and Manager laid seventeen thousand three hundred and three (17,303) feet of conduit, constructed fifty-one (51) manholes, laid and connected nineteen and four one-hundredths (19.04) miles of telegraph and telephone cable, representing four hundred sixty-three and eighty-six one-hundredths (463.86) miles of conductor; placed telephone and telegraph cable between manholes at thirteen (13) locations; connected and tested out cables on forty-three (43) cable poles; erected twenty-nine (29) iron electric light posts; erected and wired forty-seven (47) mastarms for electric light posts; erected and connected eighty-five (85) iron signal boxes on posts on underground service; erected and connected sixty-seven (67) police patrol boxes on iron posts on underground service; connected up two hundred and three (203) junction boxes; moved nine (9) electric light poles located on underground cables, on account of radius curb; new electric light and telegraph and telephone cables were laid on the new bridge over the subway at Broad street, and many changes and removals

incidental to the work, were made along the line of the subway. This force was largely in evidence during the year in the rearrangement of circuits permitted by the laying of cables in underground conduits; thirty (30) circuits were in whole or part laid under the streets' surface. The work entailed by the plans for the rearrangement of these circuits embraced an immense and almost endless amount of detail.

The circuits thus rearranged were: Fire Signal No. 3, entirely remodeled; Signal Circuit No. 5; Signal Circuit No. 7; Signal Circuit No. 9; Signal Circuit No. 10; Signal Circuit No. 11; Signal Circuit No. 12; Signal Circuit No. 14, ntirely abandoned and placed underground; Fire Signal No. 17; Fire Signal No. 18; Fire Signal No. 20; Alarm No. 1; Alarm No. 2; Alarm No. 6; Alarm No. 9; Fire Telephone Nos. 4, 6, 9, 11, 12, 13, 14; five (5) talking circuits including all the remaining engine companies not so equipped in 1897 were completed, and the east, northwest and north police wires rearranged.

The second assistant manager and inspectors upon whom fall the care and maintenance of the large number of instruments in the numerous systems under our care, have experienced an exceedingly busy year, not so much in repairs to instruments, etc., as in a general betterment of our services as is the case every year, all patrol and fire boxes have been overhauled. The telephone instruments in general looked after, inspection of electric lights, inspection of poles being painted by contract and the painting of underground patrol and fire box posts by one of the inspectors.

The care of the Electrozone plant, the laying and maintaining of all cabes in City Hall, a work in itself of considerable magnitude, a general supervision of all trolley work, occupied nearly all the time of one inspector; the time of two of the inspectors under direction of the first

assistant manager, is given up almost exclusively to underground cable work; one inspector has been detailed to give his undivided attention to the wiring and equipping engines, stations and patrol houses with incandescent electric lights, equipping fifteen (15) stations with one thousand and forty-six (1,046) lamps and in many other ways contributing to the successful operations of the affairs of the Bureau.

Numerous tests were made by an inspector for electrolysis and in nearly all cases found free of electrolytic action, but when indications pointed to a positive condition, bonding to the return cable of the Traction Company was performed; more than one thousand (1,000) terminal and trolley poles were located and their erection supervised.

The overhead construction force under the management of the Chief Line Inspector, working in sympathy with the first Assistant Manager and his corps had to meet the requirements of the overhead service made necessary by the placing of parts of the circuits underground, by a general revision of the overhead service beyond the cable terminals.

The material used by them during the year in the extension of, and repairs to, the various services under our control, embraces four hundred and eighty-seven (487) poles; two thousand four hundred and five (2,405) cross-arms; two hundred and fifteen (215) break-arms; one hundred and eighteen (118) iron brackets; two hundred and twenty-three and four-tenths (223.4) miles of telegraph and telephone iron and copper wire erected; thirty-two (32) fire signal boxes, and forty-two (42) patrol boxes, moved; forty (40) fire signal and thirty-four (34) patrol boxes, moved sixty-five (65) poles; reset seventy-two (72) poles; took down and removed from the streets one hundred and twenty (120) poles; paved around three hundred

and eighty-four (384), and cemented around sixty-eight (68) poles; relaid nineteen (19) flag-stones; dug out thirty-seven (37) stumps of old poles; trimmed four hundred and five (405) trees; erected one hundred and seventy-eight (178) guy wires; used two thousand eight hundred and sixty-two (2,862) feet of gas pipe in the erection of fire signal and patrol boxes; erected nine and six-tenths (9.6) miles of two and four conductor cable, and removed from the poles one hundred and sixty and thirty-seven one hundredths (160.37) miles of wire belonging to the City, and fifty-seven and seventy-one hundredths (57.71) miles of foreign wires from the City poles. The immense amount of details incidental to overhead construction work performed by this corps of men, it will be impossible to enumerate here.

Miscellaneous.

The amount of miscellaneous work this Bureau is called on to perform is yearly increasing, departments and bureaus outside the Department of Public Safety, where electrical work was done heretofore by private parties is now installed and maintained by us. It is our endeavor to stand ready at all times to assist each and all branches of the municipal government in every way possible. As an illustration, the City Treasurer was equipped with electric fans, alarm gongs, patrol box, pushes and buzzers; the suite of rooms occupied by the City Solicitor was equipped with annunciators, pushes, buzzers; assisted the Bureau of Water, when moving into City Hall; connected for the Building Commission the banks of elevators on the northwest corner of City Hall with our battery room; rewired and connected the City Controller's suite of rooms for calls, etc. A number of Court rooms in City Hall were equipped with calls; in a number of instances an overflow of water from a spigot left running during the night,

caused a renewal of the wiring of the rooms in City Hall in which it occurred.

The miscellaneous work in a Bureau of the size of this is necessarily enormous, it being impossible to enumerate or mention in a report of this nature. House bells, buzzers, push buttons, annunciators, etc., etc., have been introduced into many of the police stations, engine houses, etc.

The batteries of the electric launch were overhauled in the spring, when she was placed in commission and continued in service until fall, when the hull began to leak, due to the rotting of the timber from the slopping over of the solution. The boat was hauled from the water and now lies at Palmer street wharf.

The armature of the electrozone plant having been burned out was rewired, and the old electrodes supplanted by a new set. This plant is run every day but Sunday with an output of 500 to 1,000 gallons per day.

American District and Western Union Telegraph district call boxes were introduced into several of the offices of the City Hall. Two wires were run from the Electrical Bureau's battery room to the Bureau of Water for telephone battery use.

In order that accuracy might be obtained in the time given by the new clocks in the tower of City Hall a pair of wires were run from the time wire of this Bureau in the operating room to the enclosure holding the master clocks in the seventh floor room of the tower where a sounder was placed, thus enabling those engaged in keeping the clock in order, to obtain the time direct from the Observatory at Washington.

In a City so large as this accidents from causes due to the multiplicity of risks attendant the practical application of modern ideas, are greatly multiplied. There is perhaps no branch of service so broadly entering into the

life of the citizen of to-day, as electricity. Its application to numerous uses necessarily involves the possibility of accidents.

The accidents and casualties resulting from the use of electricity were as follows:

On January 15th, George Rudolph, a Northern Electric Light and Power Co.'s trimmer, fell from an iron lamp pole on Fifth street, above Girard avenue.

On February 17th, James Rowan, a Brush Electric Light Co.'s trimmer, who on the 6th of February, 1897, fell from a lamp pole at southwest corner of Twenty-second and Summer streets; was killed while trimming a lamp on an iron pole on Van Pelt street, above Chestnut street.

On March 9th, Margaret Collarbeck was severely shocked by contact with a broken telephone wire in yard, rear of 2409 Callowhill street. The telephone wire laid across a trolley wire at Twenty-fourth and Hamilton streets.

On April 9th, Warren Garrison was killed by contact with a Northern Electric Light Co.'s wire on roof in rear of 405 North Second street.

On April 15th, James McGuire was killed by coming in contact with some hay wire, which had been thrown over the Southern Electric Light and Power Co.'s wires at Twenty-sixth and Catherine streets, by boys.

On May 26th, Frank Barnett was killed by contact with a Brush Electric Light Co.'s lamp, while digging in a cellar at northwest corner of Seventh and Sansom streets.

On May 27th, while looking at a parade, Mrs. Kate Dawson was severely shocked by grasping one of the Wissahickon Electric Light Co.'s wires, while standing on the bulk window of the Peerless Produce Co.'s store, at Main and Gay streets, Manayunk.

On July 20th, Walter Bush was killed by contact with a Northern Electric Light and Power Co.'s wire on the

bulk window over news-stand northwest corner of Tenth street and Girard avenue.

On July 25th, while painting the poles of the Postal Telegraph Cable Co., Samuel Dasher was severely shocked by contact with a broken Postal Telegraph Co.'s wire, that laid across the Powelton Co.'s wires, at Fifty-seventh and Market streets.

On July 28th, James Gahagen, a Southern Electric Light and Power Co. trimmer, was severely shocked while trimming lamp on iron post, northwest corner of Third and Reed streets.

On August 1st, Frank Bach, an employee of the Southern Electric Light and Power Co., was killed by contact with a motor wire in the office of the company.

On August 31st, John Lamb, a Northern Electric Light and Power Co. trimmer fell from a wooden lamp pole, southwest corner of Eleventh and Master streets; injuries not serious.

On October 1st, while painting the roof at 6812 Dittman street, Tacony, Harry Stiles came in contact with a Suburban Electric Co.'s wire, the shock causing him to fall from the roof. He was killed.

On October 1st, two horses belonging to Joseph Caskey were killed at Water and Dock streets, by a broken Bell Telephone Co.'s wire falling across the trolley wire and across the backs of the horses.

On November 18th, Charles Jesky was killed by coming in contact with a Reading Railroad electric light wire at Pier 18, Richmond Coal Wharves.

On November 23d, John Stellwagon was killed, while trimming a lamp on iron pole on the west side of Fifth street, below Green street.

On December 5th, Peter Ellis was killed by contact with a broken telephone wire that was lying across one

of the Kensington Electric Company's wires at the northeast corner of Richmond and Otis streets.

In conclusion, I desire to thank you for your courteous consideration; the manager of the Bureau, for the able manner in which he has conducted the affairs of the Bureau, and to the Assistant Managers, Clerks, Inspectors, etc., for the untiring assistance in the construction, maintenance and operation of the service.

Respectfully,

D. R. WALKER,

Chief of Bureau.

Summary of the Police Signal and Telephone Service. Wagon Calls during the Year 1898.

Months.	Patrol No. 2. 2d District.	Patrol No. 3. 3d and 4th Districts.	Patrol No. 7. 7th and 8th Districts.	Patrol No. 9. 9th District.	Patrol No. 10. 10th District.	Patrol No 11. 11th District.	Patrol No. 12. 12th District.	Patrol No. 13. 13th District.	Patrol No. 14. 14th District.	Patrol No. 15. 15th and 27th Districts.	Patrol No. 16. 16th District.	Patrol No. 17. 1st and 17th Districts.	Patrol No. 18. 18th District.	Patrol No. 19. 5th and 19th Districts.	Patrol No. 20. 6th and 20th Districts.	Patrol No. 21. 21st and 32d Districts.	Patrol No. 22. 22d and 28th Districts.	Patrol No. 23. 23d District.	Patrol No. 24. 24th District.	Patrol No. 25. 25th District.	Patrol No. 26. 26th District.	Patrol No. 29. 29th District.	Patrol No. 30. 30th District.	Totals.
January	197	252	218	213	201	108	113	60	71	98	139	218	133	223	357	125	111	109	111	144	75	83	92	3,441
February	216	293	202	202	184	106	99	64	54	82	136	232	188	265	264	111	115	74	116	142	92	77	101	3,365
March	271	358	224	224	183	140	132	79	67	120	168	292	191	233	306	129	156	113	137	178	110	107	124	4,045
April	308	377	209	203	187	155	138	67	60	102	158	270	175	265	313	137	148	105	132	186	101	95	121	4,012
May	306	348	261	259	244	186	159	65	88	111	220	328	237	347	293	206	182	159	160	232	104	109	135	4,789
June	311	468	270	245	228	181	144	63	109	138	228	279	231	270	294	212	197	167	141	177	100	123	156	4,782
July	322	472	264	239	249	194	135	102	112	133	215	327	203	265	329	203	165	124	158	216	106	122	153	4,803
August	312	533	257	270	279	169	159	88	136	164	189	386	204	388	316	219	197	138	152	231	133	134	145	5,049
September	309	457	243	282	238	161	153	93	100	127	158	298	178	376	387	244	181	139	139	195	75	118	147	4,798
October	322	461	296	275	284	156	131	81	94	106	194	297	203	299	393	227	172	113	139	227	124	139	119	4,852
November	220	412	231	159	214	142	112	55	88	95	160	262	153	293	359	167	111	113	109	157	103	72	103	3,890
December	290	512	328	198	250	141	130	67	72	70	119	280	197	352	414	202	176	135	106	183	95	87	135	4,589
Totals	3,384	4,943	3,003	2,769	2,741	1,834	1,605	884	1,051	1,341	2,084	3,369	2,246	3,576	4,025	2,182	1,911	1,489	1,595	2,268	1,218	1,266	1,531	52,265

Summary of the Police Signal and Telephone Service during the year 1898.

Months.	CALLS FROM PRIVATE INSTITUTIONS.																Total of All Calls.
	Guarantee Trust Co., 3d District.	West End Trust Co., 5th District.	Market St. Nat'l Bank, 6th District.	Commonwealth Trust Co., 6th District.	Keystone Watch Case Co., 9th District.	Germantown National Bank, 14th District.	Germantown Trust Co., 14th District.	Conyers, Button & Co., 14th District.	United States Mint, 19th District.	Southwestern National Bank, 19th District.	City Treas'r's Office, 20th District.	Centennial Bank, 21st District.	West Philada. Bank, 21st District.	University Library, 21st District.	Northwestern Bank, 23d District.	Total Calls from Private Institutions.	
January	158	317	62	372	341	212	372	373	.....	421	.....	186	.....	372	204	3,390	446,501
February	152	315	56	336	309	196	336	336	.....	391	.....	168	.....	336	189	3,120	401,595
March	164	309	62	372	341	217	372	372	.....	403	.....	186	.....	372	198	3,368	449,185
April	156	315	60	360	330	209	360	360	.....	426	.....	180	.....	360	194	3,310	435,027
May	160	315	62	372	341	218	368	358	.....	480	.....	186	.....	372	202	3,429	447,218
June	158	306	60	360	330	199	339	349	107	410	.....	180	.....	360	192	3,350	419,624
July	162	324	62	372	341	208	316	356	490	453	.....	186	.....	372	199	3,841	432,718
August	160	315	62	372	341	217	331	362	484	459	528	186	.....	372	185	4,374	429,461
September	156	315	60	360	330	196	347	360	450	443	519	180	224	360	189	4,489	428,453
October	162	306	62	372	341	214	364	370	481	466	544	186	520	372	191	4,951	439,659
November	158	324	60	360	330	211	359	359	484	426	528	180	500	360	171	4,810	430,946
December	164	324	62	372	341	189	338	339	483	417	504	186	509	372	194	4,794	447,176
Totals	1,910	3,785	730	4,380	4,016	2,486	4,202	4,289	2,979	5,195	2,123	2,110	1,753	4,380	2,308	47,226	5,207,553

Showing the Box in each District having the Greatest Number of Telephone Calls during the year 1898.

Districts.	Nos. of Boxes.	Locations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
First	123	Sixteenth and Kater streets	1,258	1,081	1,248	1,269	1,205	1,160	1,222	1,173	1,172	1,103	1,042	1,228	14,161
Second	55	Fourth and Christian streets	1,604	1,450	1,594	1,545	1,598	1,524	1,592	1,582	1,525	1,588	1,536	1,581	18,719
Third	52	Seventh and Walnut streets	1,708	1,544	1,761	1,677	1,712	1,682	1,727	1,733	1,690	1,727	1,704	1,716	20,381
Fourth	341	Seventh and Race streets	1,736	1,570	1,738	1,685	1,739	1,687	1,736	1,737	1,680	1,737	1,680	1,739	20,464
Fifth	17	Eighteenth and South streets	1,994	1,693	1,988	1,665	1,015	695	704	772	737	718	710	769	13,410
Sixth	55	Ninth and Race streets	1,995	1,671	1,966	1,689	1,805	1,584	1,724	1,789	1,851	1,758	1,933	1,863	21,628
Seventh	37	Front and Noble streets	1,290	1,142	1,251	1,170	1,210	1,216	1,302	1,272	1,193	1,251	1,194	1,334	14,825
Eighth	9	Darien and Willow streets	1,808	1,690	1,712	1,610	1,753	1,642	1,816	1,806	1,804	1,806	1,799	1,786	21,037
Ninth	35	Nineteenth and Callowhill streets	2,186	2,156	2,294	2,219	2,296	2,229	2,290	2,297	2,277	2,230	2,220	1,937	26,641
Tenth	421	Second and Girard avenue	1,581	1,428	1,582	1,530	1,581	1,5 8	1,581	1,580	1,530	1,581	1,532	1,581	18,615
Eleventh	321	Belgrade street and Susquehanna ave.	1,174	1,027	1,174	1,144	1,189	1,125	1,185	1,130	1,139	1,144	1,142	1,186	13,759
Twelfth	3	Watts street and Girard avenue	1,614	1,424	1,610	1,441	1,144	1,081	1,195	1,111	1,154	1,157	1,093	1,175	15,149
Thirteenth	5	Lyceum and Flemming streets	1,144	1004	1,144	1,095	1,142	1,095	1,108	1,137	1,082	1,098	1,095	1,158	13,403
Fourteenth	332	Germantown ave. and Wister street	897	733	839	794	798	732	714	805	726	834	874	824	9,489
Fifteenth	333	Frankford ave. and Sellers street	1,812	1,618	1,868	1,813	1,867	1,814	1,839	1,888	1,794	1,763	1,796	1,872	21,744
Sixteenth	431	Forty-second and Haverford streets	1,238	1,045	1,165	1,213	1,216	1,141	1,143	1,120	1,135	1,148	1,072	1,079	13,715

Showing the Box in each District having the Greatest Number of Telephone Calls—Continued.

Districts.	Nos. of Boxes.	Locations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Seventeenth.....	52	Point Breeze ave. and Dickinson st...	1,953	1,764	1,953	1,890	1,953	1,500	1,550	1,953	1,890	1,953	1,890	1,953	22,202
Eighteenth.....	313	Front and York streets.....	1,198	1,077	1,191	1,149	1,190	1 148	1,184	1,148	1,151	1,190	1,153	1,196	14,955
Nineteenth.....	55	Broad and Sansom streets.....	1,364	1,495	2,124	1,968	1,914	1,397	1,115	1,184	1,197	1,274	1,256	1,588	17,879
Twentieth.....	27	Nineteenth and Race streets.....	1,358	1,104	1,215	1,283	1,420	1,246	1,175	1,139	1,297	1,497	1,437	1,419	15,521
Twenty-first.....	31	Forty-sixth st. and Kingsessing ave...	1,022	915	1,937	2,609	2,706	2,523	2,555	2,343	2,597	2,544	2,399	2,580	26,730
Twenty-second....	48	Eighteenth and York streets.....	1,291	1,190	1,293	1,276	1,291	1,275	1,298	1,282	1,276	1,287	1,290	1,293	15,342
Twenty-third	21	Twenty-third st. and Columbia ave...	1,923	1,686	1,930	1,802	1,829	1,785	1,873	1,524	1,780	1,901	1,786	1,865	21,684
Twenty-fourth.....	8	Ann and Amber streets.....	554	500	564	547	562	5 6	567	564	532	562	536	557	6,571
Twenty-fifth	35	Sixth and Dickinson streets.....	1,188	1,054	1,216	1,170	1,184	1,084	1,187	1,131	1,099	1,156	1,089	908	13,362
Twenty-sixth.....	341	Cumberland and Jasper streets.....	1,164	1,066	1,160	1,139	1,167	1,135	1,161	1,169	1,130	1,174	1,144	1,172	13,781
Twenty-seventh ..	22	Keystone and Disston streets.....	826	675	718	798	828	736	659	518	803	648	642	695	8,541
Twenty-eighth.....	41	Twelfth and Berks streets.....	1,178	1,031	1,149	1,124	1,138	1,001	952	954	1,016	1,107	986	1,112	12,748
Twenty-ninth.....	423	Forty-eighth street and Lancaster ave.	1,352	1,207	1,362	1,303	1,345	1,287	1,342	1,332	1,279	1,298	1,323	1,292	15,722
Thirtieth.....	33	Kensington avenue and "C" street....	1,090	1,085	1,114	1,185	1,067	1,196	1,183	1,200	1,187	1,156	1,183	1,194	13,840
Thirty-second.....	512	Seventy-second st. and Woodland av..	.....	.....	1,120	1,675	1,705	1,492	1,544	1,549	1,597	1,669	1,699	1,775	15,775

Showing the Box in each District having the Greatest Number of Wagon Calls during the year 1898.

Districts.	Nos. of Boxes.	Locations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
First	123	Sixteenth and Kater streets	16	12	10	14	22	7	14	18	16	18	10	15	172
Second	51	Leithgow and Bainbridge streets	29	32	29	44	48	42	40	37	37	29	26	48	441
Third	44	Sixth and South streets	41	46	49	64	51	62	68	56	49	53	56	58	653
Fourth	42	Water and Arch streets	3	10	10	8	5	14	17	32	22	13	14	9	157
Fourth	333	Delaware avenue and Market street	9	11	16	12	12	12	12	17	12	17	14	13	167
Fifth	17	Eighteenth and South streets	19	19	12	14	12	11	8	17	18	16	15	24	185
Sixth	331	Ninth and Market streets	10	9	13	15	6	10	7	11	11	14	17	18	141
Seventh	26	York avenue and Willow street	8	7	16	15	18	10	12	18	10	14	9	25	162
Eighth	18	Eighth and Wood streets	7	9	11	8	8	6	7	9	8	18	14	9	114
Ninth	15	Twenty-fifth and Callowhill streets	9	19	25	15	20	31	28	20	20	23	4	11	225
Tenth	413	Front and Laurel streets	25	31	22	21	37	19	28	34	24	34	22	38	335
Eleventh	62	Richmond and Cumberland streets	9	10	7	10	17	14	17	16	23	23	17	19	182
Twelfth	3	Watts and Girard avenue	5	3	7	10	15	9	5	9	9	11	2	6	91
Thirteenth	16	Jamestown and Main streets	14	19	22	18	15	12	23	15	14	16	12	13	194
Fourteenth	6	Chelten avenue east of Main street	3	5	8	7	3	9	9	8	3	4	5	1	65
Fifteenth	152	Frankford avenue and Oxford pike	7	4	9	6	5	11	8	11	5	10	8	7	91

Showing the Box in each District having the Greatest Number of Wagon Calls, etc.—Continued.

Districts.	Nos. of Boxes.	Locations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Sixteenth	24	Lancaster avenue and Preston street	6	12	17	12	15	10	15	12	8	17	9	9	142
Seventeenth	52	Point Breeze and Dickinson street	15	3	15	15	13	13	8	12	15	15	15	12	151
Eighteenth	4	Third and Columbia avenue	5	10	10	10	19	24	9	8	9	12	6	14	136
Nineteenth	23	Tenth and Locust streets	9	11	14	17	13	19	9	22	14	10	4	28	170
Twentieth	3	Fifteenth and Market streets	50	35	35	40	44	26	38	34	37	60	47	53	499
Twenty-first	86	Thirtieth and Chestnut streets	2	15	6	9	9	4	14	11	10	3	1	9	93
Twenty-second	37	Twenty-eighth and York streets	6	5	3	5	5	8	8	6	5	2	5	6	74
Twenty-third	21	Twenty-third and Columbia avenue	13	6	5	7	11	11	10	17	20	7	3	14	124
Twenty-fourth	15	Garnet and Somerset streets	16	12	19	13	13	10	12	4	12	11	6	1	129
Twenty-fifth	34	Thirteenth and Jackson streets	6	13	7	12	10	14	9	5	8	10	13	10	117
Twentysixth	222	Huntingdon and Emerald streets	9	7	18	12	21	15	18	22	9	25	23	14	193
Twenty-seventh	52	State road and Rhawn street	3	2	1	.....	1	1	1	2	.....	.....	2	.....	13
Twenty-eighth	86	Twenty-ninth and Diamond streets	3	5	10	8	16	13	12	14	7	9	3	6	106
Twenty-ninth	228	Fifty-fourth and Lansdowne avenue	5	7	12	10	5	9	8	21	13	12	7	5	114
Thirtieth	33	Kensington avenue and "C" street	7	9	7	7	12	6	10	10	8	10	8	6	100
Thirty-second	243	Forty-ninth and Woodland avenue	.....	.....	.....	.....	14	16	11	15	12	8	4	11	91

Synopsis of Wagon Calls of the Various Patrols during the Year 1898.

Months.	Patrol No. 2—2d District.					Patrol No. 3—3d & 4th Districts.					Patrol No. 7—7th & 8th Dist's.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	142	29	5	21	197	158	45	9	40	252	127	29	4	58	218
February	163	37	5	11	216	180	57	13	43	293	117	23	7	55	202
March	192	56	5	18	271	236	52	14	56	358	141	17	7	59	224
April	240	47	6	15	308	244	62	11	60	377	144	20	7	38	209
May	246	44	7	9	306	200	70	16	62	348	173	23	7	58	261
June	245	52	6	8	311	306	75	23	64	468	187	21	7	55	270
July	218	85	3	16	322	293	82	20	77	472	171	23	11	59	264
August	226	68	5	13	312	358	81	15	79	533	163	35	3	56	257
September	208	71	6	24	309	270	88	25	74	457	153	25	8	62	243
October	233	62	2	25	322	270	78	27	86	461	183	34	2	77	296
November	155	40	6	19	220	248	71	23	70	412	166	19	.....	46	231
December	216	55	3	16	290	320	83	32	77	512	200	38	6	84	328
Totals	2,484	646	59	195	3,384	3,083	844	228	788	4,943	1,925	307	64	707	3,003

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 9—9th District.					Patrol No. 10—10th District.					Patrol No. 11—11th District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	103	53	4	48	213	155	21	5	20	201	77	11	3	12	103
February	113	36	7	46	202	145	16	3	20	184	86	14	.....	6	106
March	135	38	1	50	224	149	17	2	15	183	105	23	1	11	140
April	124	36	2	41	203	145	17	7	18	187	115	21	3	16	155
May	149	46	3	61	259	168	26	3	47	244	125	34	2	25	186
June	133	55	3	54	245	161	28	5	34	228	121	38	4	18	181
July	122	51	3	63	239	185	36	7	21	249	125	35	6	28	194
August	148	60	3	59	270	195	45	3	36	279	116	39	1	13	169
September	133	77	3	69	282	167	36	1	34	238	105	37	2	17	161
October	150	72	1	52	275	215	40	2	27	284	110	23	2	21	156
November	89	36	1	33	159	155	30	3	26	214	107	24	1	10	142
December	119	41	3	35	198	195	30	5	20	250	106	25	2	8	141
Total	1,523	601	34	611	2,169	2,085	342	46	318	2,741	1,298	324	27	185	1,834

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 12—12th District.					Patrol No. 13—13th District.					Patrol No. 14—14th District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	61	24	6	22	113	30	20	1	9	60	29	16	8	18	71
February	49	19	6	25	99	36	21	.....	7	64	26	10	7	11	54
March	72	21	4	35	132	44	20	2	13	79	36	8	2	21	67
April	75	23	7	33	138	35	20	2	10	67	25	8	4	23	60
May	84	22	5	48	159	34	17	1	13	65	38	18	2	30	88
June	85	23	5	31	144	31	28	1	3	63	59	13	6	31	109
July	69	25	5	36	135	48	34	6	14	102	55	28	4	25	112
August	81	35	3	40	159	52	29	3	4	88	68	24	3	41	136
September	79	27	5	42	153	51	30	3	9	93	51	11	5	33	100
October	65	28	1	37	131	43	23	.....	15	81	35	22	5	32	94
November	51	19	2	40	112	27	24	1	3	55	37	19	3	29	88
December	66	28	8	28	130	31	27	3	6	67	20	23	7	22	72
Total	837	294	57	417	1,605	462	293	23	106	884	479	200	56	316	1,051

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 15—15th & 27th Dists.					Patrol No. 16—16th District.					Patrol No. 17—1st & 17th Dists.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	43	16	4	30	93	83	40	9	7	139	163	22	9	24	218
February	26	7	10	39	82	93	29	1	13	136	167	19	8	38	232
March	47	17	8	53	120	121	32	7	8	168	215	28	3	46	292
April	37	18	6	41	102	118	26	1	13	158	207	20	2	41	279
May	54	11	7	39	111	161	27	2	30	220	232	31	5	60	328
June	61	16	6	55	138	160	38	7	23	228	200	23	8	48	279
July	38	22	2	71	133	143	48	2	22	215	224	49	1	53	327
August	75	14	5	70	164	75	47	6	11	139	210	31	3	42	286
September	52	35	3	37	127	89	50	3	16	158	218	34	2	44	298
October	35	9	1	61	106	124	51	1	18	194	200	35	3	59	297
November	59	11	1	24	95	100	40	4	16	160	182	31	6	43	262
December	35	9	6	20	70	77	26	1	15	119	222	25	10	23	280
Totals	562	185	54	540	1,341	1,344	454	44	192	2,034	2,440	348	60	521	3,369

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 18—18th District.					Patrol No. 19—5th & 19th Dists.					Patrol No. 20—6th & 20th Dists.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	85	11	1	36	133	151	18	6	48	223	224	39	9	85	357
February	99	19	1	19	138	176	29	6	54	265	183	41	7	33	264
March	138	22	4	30	194	159	23	4	47	233	205	55	5	41	306
April	115	21	3	36	175	186	25	4	50	265	188	62	2	61	313
May	162	29	7	39	237	216	38	6	87	347	190	47	5	51	293
June	164	25	5	37	231	176	24	3	67	270	197	57	4	36	294
July	132	35	7	29	203	166	24	6	69	265	225	64	1	39	329
August	133	29	2	40	204	277	34	2	75	388	199	72	1	44	316
September	106	39	3	30	178	215	39	4	118	376	198	98	2	89	387
October	129	52	1	21	203	158	36	2	103	299	236	69	2	86	393
November	108	26	1	18	153	180	20	4	89	293	249	56	.....	54	359
December	122	32	5	38	197	227	33	7	85	352	301	59	5	49	414
Totals	1,493	340	40	373	2,246	2,287	343	54	892	3,576	2,595	719	43	668	4,025

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 21—21st & 32d Dists.					Patrol No. 22—22d & 28th Dists.					Patrol No. 23—23d District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	59	33	2	31	125	61	22	7	21	111	50	23	1	35	109
February	60	30	5	16	111	70	21	3	21	115	27	23	1	23	74
March	64	42	2	21	129	87	29	4	36	156	45	23	4	41	113
April	87	33	3	14	137	75	24	6	43	148	47	20	1	37	105
May	138	41	4	23	206	98	27	7	50	182	76	23	2	58	159
June	128	55	5	24	212	107	27	5	58	197	85	39	1	42	167
July	117	47	5	34	203	86	40	5	34	165	55	38	5	26	124
August	129	51	7	32	219	98	45	1	53	197	53	46	4	35	138
September	119	74	7	44	244	82	43	1	55	181	64	36	1	38	139
October	130	61	2	34	227	81	46	9	36	172	35	40	1	37	113
November	107	36	8	16	167	54	29	7	21	111	49	39	2	23	113
December	130	36	5	31	202	92	40	10	34	176	58	46	2	29	135
Totals	1,263	539	55	320	2,182	991	393	65	462	1,911	644	396	25	424	1,489

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 24—24th District.					Patrol No. 25—25th District.					Patrol No. 26—26th District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	65	15	3	28	111	95	36	7	6	144	72	2	.....	1	75
February	67	18	3	28	116	76	48	9	9	142	86	3	.....	3	92
March	85	18	2	32	137	117	33	5	23	178	99	6	.....	5	110
April	88	11	3	30	132	116	40	4	26	186	87	4	.....	10	101
May	92	19	3	46	160	149	39	2	42	232	89	8	.....	7	104
June	61	33	4	43	141	106	39	5	27	177	82	13	.....	5	100
July	47	34	4	68	153	124	55	8	29	216	91	6	.....	9	106
August	78	32	5	42	152	134	74	3	20	231	110	13	.....	10	133
September	70	19	4	46	139	113	48	4	30	195	61	8	.....	6	75
October	74	24	7	34	139	142	53	2	30	227	104	7	.....	13	124
November	55	21	3	30	109	94	48	5	15	157	88	12	.....	3	103
December	40	20	2	44	106	111	54	3	15	183	82	9	.....	4	95
Totals	817	264	43	471	1,595	1,377	562	57	272	2,268	1,051	91	.....	76	1,218

Synopsis of Wagon Calls of the Various Patrols during the Year 1898—Continued.

Months.	Patrol No. 29—29th District.					Patrol No. 30—30th District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	37	4	5	37	83	61	17	1	13	92
February	36	2	5	34	77	66	13	7	15	101
March	66	2	2	37	107	88	18	3	15	124
April	47	8	1	39	95	84	11	4	22	121
May	55	6	1	47	109	91	13	4	27	135
June	57	13	6	47	123	104	22	6	24	156
July	55	18	.....	49	122	108	36	3	6	153
August	66	12	6	50	134	101	16	1	27	145
September	68	10	3	37	118	94	31	3	19	147
October	70	13	.....	56	139	89	26	3	1	119
November	34	9	2	27	72	67	19	1	16	103
December	53	2	.....	32	87	90	19	2	24	135
Totals	644	99	31	492	1,266	1,0 3	241	38	209	1,531

Synopsis of Wagon Calls during the year 1898.

Months.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	2,136	546	109	650	3,441
February	2,147	5 5	114	569	3,365
March	2,646	600	86	713	4,045
April	2,629	577	89	717	4,012
May	3,020	659	101	959	4,739
June	3,016	757	125	884	4,782
July	2,897	915	114	877	4,803
August	3,140	932	85	892	5,049
September	2,766	966	93	973	4,798
October	2,911	904	76	961	4,852
November	2,461	674	84	671	3,890
December	2,913	760	127	789	4,589
Totals	32,682	8,825	1,203	9,555	52,265

Summary of the Operation of the Fire Alarm Telegraph during the year 1898.

Months.	First Alarms.	Second Alarms.	Third Alarms.	Fourth Alarms.	Fifth Alarms.	False Alarms.	Totals.
January	80	2	1	.....	.....	.....	83
February	71	4	3	.....	.....	.....	78
March	53	2	1	.....	.....	1	57
April	63	2	1	.....	.....	.....	66
May	46	3	2	1	1	1	54
June	69	6	2	2	1	.....	80
July	69	4	3	2	2	.....	80
August	53	2	1	.....	.....	.....	56
September	53	2	2	1	.....	.....	58
October	58	.....	.....	.....	.....	.....	58
November	62	1	1	.....	.....	.....	64
December	78	3	1	1	.....	1	84
Totals	755	31	18	7	4	3	818

Showing the Number of Alarms for each Hour of the Day, during the year 1898.

Months.	A. M.						P. M.						Total Day Alarms.	P. M.						A. M.						Total Night Alarms.	Totals.
	6	7	8	9	10	11	12	1	2	3	4	5		6	7	8	9	10	11	12	1	2	3	4	5		
January	1	1	1	4	3	7	2	2	5	6	3	9	44	5	7	3	5	3	4	1	2	2	4	2	1	39	83
February	.....	4	.....	3	2	1	4	2	1	5	4	5	31	3	3	6	5	4	2	7	5	3	4	3	2	47	78
March	2	1	1	2	.....	2	.....	1	2	2	2	2	17	4	6	4	4	5	2	5	2	2	1	.....	5	40	57
April	.....	3	.....	2	4	1	1	.....	3	1	3	4	22	2	6	7	2	5	1	6	6	.....	3	1	4	44	66
May	.....	.....	1	.....	3	3	3	1	2	2	.....	6	26	1	2	4	3	5	1	4	2	.....	4	2	.....	28	54
June	2	.....	2	1	1	6	.....	3	2	3	3	4	32	5	3	7	3	4	7	2	2	1	4	3	2	48	80
July	.....	2	3	2	2	3	.....	4	9	3	.....	1	29	3	4	6	5	2	3	2	5	4	7	2	3	51	80
August	2	3	2	.....	2	6	7	1	1	3	3	1	31	4	2	5	3	1	1	2	.....	1	3	2	1	25	56
September	4	1	2	.....	1	1	.....	.....	1	4	.....	9	23	5	4	2	3	1	2	7	2	6	.....	.....	3	35	58
October	2	1	2	.....	5	3	3	.....	1	1	1	3	22	4	4	1	5	2	3	5	5	3	1	1	2	36	58
November	2	....	1	2	3	2	3	4	.....	10	2	6	35	4	3	5	3	6	3	2	.....	1	2	.....	.....	29	64
December	2	3	6	2	3	3	2	2	3	4	2	6	38	2	10	4	8	3	3	1	3	3	4	1	4	46	84
Totals	17	19	21	18	29	43	25	20	30	49	23	56	350	42	59	54	49	41	37	44	34	26	38	17	27	468	818

Showing the Number of Alarms from each Box during 1898.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
2	.....	42	.....	83	2	142	.....	178	.....	227	1	265	1
3	1	43	4	84	1	143	1	179	.....	228	5	266	.....
4	1	45	4	85	2	144	.....	181	3	229	.....	267	.....
5	1	46	.....	86	1	145	.....	182	2	231	1	268	.....
6	.....	47	2	87	2	146	.....	183	.....	232	.....	269	.....
7	3	48	.....	89	1	147	2	184	1	233	1	271	2
8	3	49	.....	91	3	148	1	185	1	234	2	272	1
9	4	51	1	92	.....	149	1	186	.....	235	.....	273	.....
12	6	52	2	93	3	151	.....	187	.....	236	4	274	1
13	5	53	2	94	3	152	1	188	.....	237	.....	275	.....
14	.....	54	.....	95	1	153	6	189	2	238	1	276	4
15	3	56	.....	96	.....	154	.....	191	.....	239	.....	277	1
16	4	57	1	97	.....	155	.....	192	1	241	4	278	1
17	.....	58	2	98	.....	156	1	193	.....	242	1	279	.....
18	1	59	.....	121	.....	157	.....	194	.....	243	.....	281	1
19	.....	61	3	122	.....	158	1	195	2	244	1	282	2
21	.....	62	5	123	.....	159	.....	196	.....	245	1	283	.....
23	2	63	4	124	1	161	2	197	.....	246	3	284	.....
24	2	64	3	125	1	162	.....	198	2	247	1	285	.....
25	1	65	3	126	1	163	.....	199	.....	248	.....	286	.....
26	1	67	3	127	1	164	2	212	.....	249	1	287	.....
27	6	68	1	128	.....	165	.....	213	.....	251	1	288	.....
28	.....	69	.....	129	1	166	1	214	1	252	3	289	.....
29	4	71	1	131	1	167	.....	215	2	253	2	291	2
31	.....	72	1	132	.....	168	1	216	3	255	.....	292	.....
32	.....	73	.....	133	.....	169	1	217	2	256	.....	293	1
34	.....	74	2	134	.....	171	1	218	2	257	1	294	4
35	1	75	.....	135	1	172	1	219	.....	258	4	295	5
36	.....	76	2	136	.....	173	.....	221	.....	259	1	296	2
37	.....	78	3	137	.....	174	3	223	.....	261	2	297	.....
38	.....	79	1	138	1	175	.....	224	1	262	6	298	1
39	3	81	1	139	2	176	9	225	.....	263	.....	299	.....
41	.....	82	1	141	2	177	.....	226	.....	264	4	312	.....

Showing the Number of Alarms—Continued.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
313	1	351	.....	387	2	435	.....	473	.....	521	6	558	.....
314	1	352	1	388	1	436	1	474	.....	522	.....	559	.....
315	1	353	.....	389	2	437	2	475	.....	523	.....	561	.....
316	.....	354	3	391	4	438	.....	476	.....	524	.....	562	.....
317	6	355	.....	392	1	439	.....	477	.....	525	1	563	1
318	.....	356	2	393	2	441	2	478	.....	526	.....	564	.....
319	.....	357	.....	394	.....	442	4	479	.....	527	1	565	2
321	.....	358	2	395	2	443	.....	481	2	528	1	566	.....
322	.....	359	1	396	2	445	.....	482	1	529	2	567	.....
323	.....	361	2	397	1	446	1	483	.....	531	.....	568	1
324	.....	362	2	398	3	447	1	484	3	532	.....	569	.....
325	1	363	1	399	.....	448	.....	485	1	533	.....	571	.....
326	4	364	.....	412	.....	449	1	486	3	534	1	572	1
327	2	365	.....	413	.....	451	.....	487	1	535	.....	573	.....
328	.....	366	1	414	1	452	.....	488	.....	536	3	574	.....
329	.....	367	1	415	.....	453	.....	489	.....	537	2	575	6
331	.....	368	.....	416	.....	454	.....	491	.....	538	1	576	3
332	2	369	.....	417	3	455	.....	492	.....	539	.....	577	.....
334	.....	371	.....	418	1	456	.....	493	1	541	2	578	.....
335	.....	372	1	419	2	457	.....	494	.....	542	.....	579	1
336	1	373	5	421	1	458	1	495	1	543	2	581	.....
337	.....	374	.....	422	.....	459	2	496	.....	544	1	582	.....
338	.....	375	.....	423	.....	461	.....	497	.....	545	6	583	.....
339	2	376	.....	424	.....	462	4	498	3	546	2	584	.....
341	2	377	.....	425	1	463	3	499	1	547	4	585	.....
342	.....	378	.....	426	.....	464	.....	512	2	548	1	586	.....
343	.....	379	.....	427	6	465	2	513	2	549	1	587	.....
344	3	381	1	428	1	466	1	514	.....	551	.....	588	.....
345	2	382	.....	429	2	467	.....	515	2	552	1	589	.....
346	2	383	2	431	4	468	.....	516	1	553	.....	591	.....
347	2	384	.....	432	3	469	4	517	2	554	.....	592	.....
348	.....	385	.....	433	.....	471	1	518	.....	556	.....	593	.....
349	.....	386	.....	434	1	472	5	519	1	557	.....	594	.....

Showing the Number of Alarms—Continued.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
595	.....	643	.....	681	.....	728	.....	765	.....	814	1	851	.....
596	4	644	1	682	1	729	.....	766	1	815	2	852	.....
597	1	645	.....	683	.....	731	.....	767	3	816	1	853	.....
598	.....	646	1	684	2	732	.....	768	1	817	.....	854	.....
599	3	647	1	685	2	733	.....	769	3	818	.....	855	.....
612	1	648	.....	686	1	734	1	771	1	819	1	856	.....
613	.....	649	2	687	.....	735	1	772	2	821	.....	857	.....
614	.....	651	.....	688	.....	736	.....	773	.....	822	.....	858	.....
615	.....	652	.....	689	.....	737	1	774	1	823	.....	859	.....
616	.....	653	.....	691	1	738	.....	775	1	824	.....	861	.....
617	1	654	4	692	.....	739	.....	776	4	825	1	862	.....
618	.....	655	1	693	3	741	.....	778	.....	826	3	863	.....
619	.....	656	.....	694	1	742	.....	779	5	827	1	864	1
621	.....	657	.....	695	.....	743	.....	781	1	828	3	865	.....
622	.....	658	.....	696	.....	744	.....	782	4	829	1	866	.....
623	1	659	.....	697	.....	745	1	783	6	831	2	867	
624	.....	661	.....	698	.....	746	2	784	.....	832	2	868	.....
625	1	662	.....	699	1	747	.....	785	2	833	4	869	.....
626	1	663	.....	712	3	748	.....	786	2	834	1	871	1
627	.....	664	1	713	2	749	1	787	.....	835	.....	872	.....
628	1	665	.....	714	.....	751	.....	788	3	836	1	873	1
629	1	667	.....	715	2	752	1	789	3	837	1	874	.....
631	1	668	.....	716	1	753	1	791	1	838	1	875	1
632	.....	669	.....	717	1	754	1	792	.....	839	.....	876	4
633	.....	671	.....	718	.....	755	1	793	.....	841	.....	877	5
634	1	672	.....	719	.....	756	2	794	.....	842	.....	878	1
635	2	673	.....	721	.....	757	1	795	1	843	.....	879	.....
636	.....	674	2	722	.....	758	.....	796	.....	844	.....	881	1
637	2	675	.....	723	1	759	3	797	.....	845	2	882	.....
638	.....	676	.....	724	1	761	4	798	1	846	.....	883	.....
639	2	677	1	725	1	762	.....	799	.....	847	.....	884	2
641	.....	678	1	726	.....	763	.....	812	.....	848	2	885	.....
642	1	679	.....	727	.....	764	.....	813	.....	849	.....	886	.....

Showing the Number of Alarms—Continued.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
887	.....	936	.....	973	1	1223	.....	1259	1	1296	.....	1346	1
889	.....	937	.....	974	.....	1224	.....	1261	.....	1297	.....	1347	.....
891	4	938	.....	975	.....	1225	.....	1262	.....	1298	.....	1348	.....
892	.....	939	.....	976	2	1226	.....	1263	.....	1299	1	1349	.....
893	.....	941	.....	977	1	1227	1	1264	.....	1312	.....	1351	.....
894	.....	942	.....	978	2	1228	.....	1265	1	1314	.....	1352	.....
895	.....	943	2	979	.....	1229	1	1266	9	1315	.....	1353	1
896	1	944	.....	981	3	1231	3	1267	.....	1316	.....	1354	.....
897	1	945	2	982	.....	1232	1	1268	.....	1317	.....	1355	.....
898	.....	946	.....	983	.....	1233	1	1269	.....	1318	.....	1356	2
899	.....	947	.....	984	.....	1234	1	1271	.....	1319	.....	1357	1
912	3	948	.....	985	.....	1235	.....	1272	.....	1321	.....	1358	1
913	3	949	.....	986	.....	1236	.....	1273	.....	1322	.....	1359	.....
914	.....	951	.....	987	.....	1237	.....	1274	.....	1323	1	1361	2
915	1	952	3	988	.....	1238	.....	1275	.....	1324	.....	1362	1
916	1	953	3	989	.....	1239	1	1276	.....	1325	1	1363	.....
917	1	954	1	991	.....	1241	.....	1277	.....	1326	.....	1364	.....
918	.....	955	.....	992	1	1242	.....	1278	.....	1327	.....	1365	.....
919	.....	956	.....	993	.....	1243	.....	1279	.....	1328	.....	1366	.....
921	.....	957	.....	994	1	1244	.....	1281	.....	1329	1	1367	.....
922	.....	958	1	995	.....	1245	5	1282	.....	1331	.....	1368	.....
923	1	959	2	996	.....	1246	.....	1283	.....	1332	.....	1369	.....
924	.....	961	.....	997	1	1247	1	1284	.....	1334	1	1371	1
925	.....	962	3	998	.....	1248	.....	1285	.....	1335	.....	1372	.....
926	.....	963	2	1212	2	1249	.....	1286	1	1336	.....	1373	.....
927	.....	964	4	1213	1	1251	1	1287	.....	1337	.....	1374	1
928	.....	965	1	1214	1	1252	.....	1288	1	1338	.....	1375	1
929	.....	966	.....	1215	.....	1253	.....	1289	1	1339	.....	1376	.....
931	.....	967	.....	1216	.....	1254	3	1291	.....	1341	2	1377	.....
932	1	968	.....	1217	4	1255	.....	1292	1	1342	.....	1378	1
933	.....	969	1	1218	1	1256	.....	1293	.....	1343	.....	1379	2
934	.....	971	.....	1219	.....	1257	.....	1294	.....	1344	2	1381	1
935	.....	972	1	1221	.....	1258	.....	1295	.....	1345	.....	1382	.....

Showing the Number of Alarms—Continued.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
1383	.....	1399	1	1427	1	1445	.....	1462	.....	1478	.....	1495	.....
1384	.....	1412	1	1428	.....	1446	.....	1463	.....	1479	.....	1496	.....
1385	1	1413	.....	1429	1	1447	.....	1464	.....	1481	.....	1497	.....
1386	.....	1414	.....	1431	.....	1448	1	1465	.....	1482	.....	1498	1
1387	1	1415	1	1432	.....	1449	.....	1466	.....	1483	.....	1499	5
1388	1	1416	.....	1433	.....	1451	.....	1467	.....	1484	.....	1512	.....
1389	.....	1417	.....	1434	.....	1452	.....	1468	1	1485	.....	1513	.....
1391	.....	1418	.....	1435	.....	1453	.....	1469	.....	1486	.....	1514	.....
1392	.....	1419	2	1436	1	1454	.....	1471	1	1487	.....	1515	.....
1393	.....	1421	1	1437	.....	1455	.....	1472	.....	1488	.....	1516	.....
1394	.....	1422	.....	1438	.....	1456	.....	1473	.....	1489	.....	1517	.....
1395	.....	1423	.....	1439	.....	1457	.....	1474	.....	1491	.....	1518	.....
1396	.....	1424	.....	1441	.....	1458	.....	1475	.....	1492	.....	1524	.....
1397	.....	1425	.....	1442	.....	1459	.....	1476	.....	1493	.....	.....	.....
1398	.....	1426	1	1443	.....	1461	.....	1477	.....	1494	1	.....	.....

Showing the Number of Permits issued to each Company and the purpose for which granted, during the Year 1898.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.							
	Running of New	Repairs to and Removal of	Removal of	Suspension of Aerial Cables.	Erection of	Resetting of	Removal of	Approval of New Work.	To make Service Connections.	General Repairs.	To draw in Cables.	Totals.
American District Telegraph Co.	10	25	1									36
American Telephone and Telegraph Co.	2	3	1							8	5	19
Ammonia Company of Philadelphia		2										2
Atlantic Refining Co.		5				1						6
Baltimore and Ohio Telegraph Co.	1	2										3
Bell Telephone Company of Philadelphia	1,319	670	6	1	46	29	2	112		229	6	2,490
Brush Electric Light Co.	146	14			30	23	2	11	4	17		247
Bureau of Water	1	2			1							4
Chelton Avenue Passenger Railway Co.	2				1							3
Cheltenham Electric Light, Heat and Power Co.	9	21			2	2						34
Columbia Electric Light Co.	2							4	3			9

Showing the Number of Permits issued to each Company, etc.—Continued.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.							
	Running of New	Repairs to and Removal of	Removal of	Suspension of Aerial Cables.	Erection of	Resetting of	Removal of	Approval of New Work.	To make Service Connections.	General Repairs.	To draw in Cables.	Totals.
Diamond Electric Co.	32	21			14	2		2				71
Edison Electric Light Co.	1							21	153	146	2	323
Germantown Electric Light Co.	18	2			12	2						34
Harrison Brothers & Co.		3										3
Hestonville, Mantua and Fairmount Pass. R. W. Co.		1					1			1		3
Holmesburg, Tacony and Frankford Electric R. W. Co.	1					1						2
Kensington Electric Co.	15	3			3	4		6	5			36
Knickerbocker Ice Co.	3	4	1									8
Manayunk and Roxborough Incline Plane & R. W. Co.	2	1			2	1						6
Manufacturers' Electric Co.	53	3			10	6						72
Northern Electric Light and Power Co.	92	3			6	6		1	1	1		110
Pennsylvania Heat, Light and Power Co.		1						9	8	2	7	27

Showing the Number of Permits issued to each Company, etc.—Continued.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.							
	Running of New	Repairs to and Removal of	Removal of	Suspension of Aerial Cables.	Erection of	Resetting of	Removal of	Approval of New Work.	To make Service Connections.	General Repairs.	To draw in Cables.	Totals.
Pennsylvania Railroad Co	12	14	3	1	.....	1	.....	.....	.....	.....	.....	31
Philadelphia Local Telegraph Co	1	12	.....	1	.....	5	1	.....	.....	.....	.....	20
Philadelphia, Reading and Pottsville Telegraph Co	25	12	8	2	2	4	6	.....	.....	.....	.....	59
Postal Telegraph-Cable Co	.....	8	1	.....	.....	3	.....	.....	.....	.....	.....	12
Pneumatic Fire Alarm Telegraph Co	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Pneumatic Transit Co	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	8
Powelton Electric Co	124	9	5	.....	22	17	2	3	.....	.....	.....	182
Southern Electric Light and Power Co	48	21	.....	.....	19	4	.....	.....	.....	.....	.....	92
Southwestern Street Railway Co	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	3
Suburban Electric Co	20	3	.....	.....	8	7	.....	.....	.....	.....	.....	38
Union Traction Co	43	23	13	.....	10	23	22	.....	.....	39	22	195
United Gas Improvement Co	11	5	1	.....	1	.....	.....	.....	.....	.....	.....	18

Showing the Number of Permits issued to each Company, etc.—Continued.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.							
	Running of New	Repairs to and Removal of	Removal of	Suspension of Aerial Cables.	Erection of	Resetting of	Removal of	Approval of New Work.	To make Service Connections.	General Repairs.	To draw in Cables.	Totals.
West End Electric Co.		2							2	4		8
Western Union Telegraph Co.	19	43	13			26	8					108
Wissahickon Electric Light Co.	41	2	1		7	7						58
Totals	2,056	942	54	5	197	174	44	177	173	520	42	4,384

Number of Miles of Overhead and Underground Wires.

Name of Company.	Mileage of wire on City poles.	Mileage of wire on other poles.	Mileage of wire on fixtures and buildings.	Totals.
American District Telegraph Co	6.17	.....	91.	97.17
American Telephone and Telegraph Co	.....	110.55	43.63	154.18
Ammonia Company of Philadelphia	.....	.....	2.25	2.25
Atlantic and Pacific Telegraph Co	.....	.....	5.97	5.97
Atlantic Refining Co	10.	10.	12.	32.
Baltimore & Ohio Telegraph Co	2.	.....	.....	2.
Bell Telephone Co. of Philadelphia	34.98	3,382.52	1,483.02	4,900.52
Brush Electric Light Co	61.49	213.09	.....	274.58
Cheltenham Electric Light, Heat and Power Co	.....	9.84	.....	9.84
Diamond Electric Co	20.20	99.10	.....	119.30
Elkinton, Jos. S. & Thos	8.	.....	.....	8.
Germantown Electric Light Co	18.15	82.86	.....	101.01
Girard Point Storage Co	10.	.....	.....	10.
Harrison Bros. & Co	4.17	4.67	.50	9.34
Holmesburg, Tacony & Frankford Pass. Railway Co	.....	50.55	.....	50.55
Kensington Electric Co	15.	46.50	.....	61.50
Knickerbocker Ice Co	10.	.....	.....	10.
Manufacturers' Electric Co	37.91	126.36	.....	164.27
Mutual Union Telegraph Co	.....	142.43	.....	142.43
Northern Electric Light and Power Co	41.	138.10	.....	179.10
Pennsylvania Railroad Co	6.89	61.27	3.08	71.24
Philadelphia Local Telegraph Co	.60	24.35	7.05	32.
Philadelphia Local Telegraph Co	2.58	25.60	.....	28.18
Philadelphia, Reading & Pottsville Telegraph Co	4.27	10.64	.....	14.91
Pneumatic Fire Alarm Telegraph Co	1.	20.	.....	21.
Postal Telegraph-Cable Co	3.14	250.79	27.50	281.43
Powelton Electric Co	38.25	148.15	.....	186.40
Roxborough, Chestnut Hill & Norristown Ry Co	.....	49.20	.....	49.20
Southern Electric Light and Power Co	45.90	182.40	.....	228.30
Southwestern Street Railway Co	.....	4.02	.....	4.02
Suburban Electric Co	10.50	203.	.....	213.50

Number of Miles of Overhead and Underground Wires—Continued.

Name of Company.	Mileage of wire on City poles.	Mileage of wire on other poles.	Mileage of wire on fixtures and buildings.	Totals.
Union Traction Co	.....	553.03	.....	553.03
United Gas Improvement Co	29.10	2.39	.....	31.40
United States Electric Lighting Co	16.02	54.43	.....	70.45
West End Electric Co	1.16	12.	.....	13.16
Western Union Telegraph Co	1.	409.38	.....	410.38
Wissahickon Electric Light Co	12.63	29.38	.....	42.01
	452.02	6,456.60	1,676.	8,584.62
City Wires	.....	.....	.....	1,583.70
Total Overhead Wires	.....	.....	.....	10,168.32

Underground Wires.	Electric light and power wires.	Telephone and telegraph wires.	Totals.
American District Telegraph Co	.....	13.83	13.83
American Telephone and Telegraph Co	.....	1147.41	1147.41
Bell Telephone Co. of Philadelphia	.....	24510.57	24510.57
Brush Electric Light Co	33.26	.....	33.26
Columbia Electric Light Co	17.06	.....	17.06
Edison Electric Light Co	155.33	.....	155.33
Girard Estate	1.40	.....	1.40
Kensington Electric Co	4.	.....	4.
Keystone Electric Light Co	11.15	.....	11.15
Manufacturers' Electric Co	5.14	.....	5.14
Northern Electric Light and Power Co	12.10	.....	12.10
Pennsylvania Heat, Light and Power Co	34.54	.....	34.54
Pennsylvania Railroad Co	.....	85.97	85.97

Number of Miles of Overhead and Underground Wires—Continued.

Underground Wires.	Electric light and power wires.	Telephone and telegraph wires.	Totals.	
Pneumatic Transit Co.	.....	1.18	1.18	
Postal Telegraph Cable Co.	471.08	.....	471 08	
Southwestern Street Railway Co.				
Union Traction Co.	1001.74	.....	1001.74	
West End Electric Co.	14.20	.....	14.20	
Western Union Telegraph Co.	.....	484.27	484.27	
City	46.20	2559.56	2605.76	
Total Underground Wires.	1807.20	28802.79	30609.99	30609.99
Total Overhead and Underground Wires	.....	.....	.....	40778.31

Summary of Underground Conduits.

	Number of Conduits.	Length in Feet.	Number of Ducts.	Length in Feet.	Miles of Ducts.
American Telephone and Telegraph Co...	76	262,504	645	1,928,604	365.26
Bell Telephone Co. of Philadelphia.....	738	447,551	5,047	2,869,985	543.56
Brush Electric Light Company.....	12	57,320	692	1,164,593	220.56
Columbia Electric Light Company.....	13	17,849	70	112,749	21.35
Diamond Electric Company.....	2	631	28	6,824	1.29
Drexel & Co.....	1	559	1	559	.11
Edison Electric Light Company.....	519	338,198	2,014	725,000	137.31
Girard Estate.....	1	5,250	4	21,000	3 97
Kensington Electric Company.....	2	10,800	15	85,800	16.25
Keystone Light and Power Company.....	20	5,543	20	5,543	1.05
Manufacturers' Electric Company.....	5	4,70	35	37,800	7.16
Northern Electric Light and Power Co...	21	20,837	125	154,765	29.31
Penn Electric Light Company.....	58	122,186	302	473,609	89.69
Pennsylvania Heat, Light and Power Co..	29	19,319	498	321,491	60.88
Philadelphia, Reading and Pottsville Telegraph Company.....	1	138	4	552	.11
Philadelphia Standard Telephone and Telegraph Company.	5	8,330	1,667	562,885	106.61
Pneumatic Transit Company.....	34	16,186	34	22.649	4.29
Powelton Electric Company.....	1	170	12	2,040	.38
Strawbridge & Clothier.....	1	45			
Union Traction Company.....	643	1,033,140	6,528	8,235,415	1,559.73
West End Electric Company.....	8	14,416	50	94,470	17.94
City	53	272,450	594	1,887,266	357.43
Totals.....	2,246	2,658,116	18,385	18,713 599	3,544.24

Number of Electric Lights in each Ward, together with the Number of Free Lights. December 31, 1898.

	Number of Lights Overhead.	Underground.		Total.
		On City Cables.	On Other Cables.	
First Ward	79	.....	.....	79
Second Ward	139	28	.....	162
Third Ward	122	34	.....	156
Fourth Ward	150	3	.....	153
Fifth Ward	126	.....	41	167
Sixth Ward	112	14	20	146
Seventh Ward	152	12	20	184
Eighth Ward	99	32	49	180
Ninth Ward	84	60	14	158
Tenth Ward	132	14	9	155
Eleventh Ward	122	.....	1	123
Twelfth Ward	119	.....	8	127
Thirteenth Ward	97	13	6	116
Fourteenth Ward	119	48	7	174
Fifteenth Ward	110	128	5	243
Sixteenth Ward	133	.....	12	145
Seventeenth Ward	138	.....	13	151
Eighteenth Ward	179	.....	1	180
Nineteenth Ward	210	23	.....	233
Twentieth Ward	202	12	26	240
Twenty-first Ward	163	.....	.....	163
Twenty-second Ward	219	.....	.....	219
Twenty-third Ward	215	.....	.....	215
Twenty-fourth Ward	133	80	.....	213
Twenty-fifth Ward	165	.....	.....	165
Twenty-sixth Ward	127	69	.....	196
Twenty-seventh Ward	216	.....	.....	216
Twenty-eighth Ward	127	.....	.....	127
Twenty ninth Ward	159	43	.....	202
Thirtieth Ward	159	38	.....	197
Thirty-first Ward	190	.....	.....	190

Thirty-second Ward			
Thirty-third Ward			
Thirty-fourth Ward			
Thirty-fifth Ward			32
Thirty-sixth Ward			
Thirty-seventh Ward			
Thirty-eighth Ward			
Thirty-ninth Ward			
Fortieth Ward			87
South Street Bridge			6
Chestnut Street Bridge			
Market Street Bridge			
Callowhill Street Bridge			
Girard Avenue Bridge			
Walnut Street Bridge			
Falls of Schuylkill Bridge			7
Total			

GIRARD ESTATE LIGHTS.

Delaware avenue, from Vine to So	
Front street, from Vine to South	
Total Girard Estate li	

Diamond Electric Compar	
Kensington Electric Com	
Manufacturers' Electric	
Powelton Electric Comp	
Southern Electric Light	
West End Electric Com	
Suburban Electric Con	5
Northern Electric Ligh	0
People's Traction Cor	3
Total free	
Grand tot	147

Return of License Charges for Attachments to City Poles, Maintenance of Poles, Erection of Poles, and Mileage of Wires Overhead for the year 1898.

	Attachments.		Maintenance of Poles.		Erection of Poles.		Wire on City Poles.		Wire on other Poles and Buildings.		Total.		Total Charges.
	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	
American District Telegraph Company	$155 50		$9 00				$25 00		$202 50		$392 00		$392 00
American Telegraph and Telephone Company			96 00						465 00		561 00		561 00
Ammonia Company of Philadelphia	28 00		6 00				5 00		5 00		44 00		44 00
Atlantic and Pacific Telegraph Company	4 00			$263 00			2 50			32 50	6 50	$295 50	302 00
Atlantic Refining Company	168 50		4 00				25 00		55 00		252 50		252 50
Baltimore and Ohio Telegraph Company	28 50						5 00				33 50		33 50
Bell Telephone Company, of Philadelphia	653 50		2,652 00		$1 045 00		77 50		10,552 50		14,980 50		14,980 50
Brush Electric Light Co	1,021 00		1,983 00		155 00		310 00		935 00		4,404 00		4,404 00
Cheltenham Electric Light, Heat and Power Co			64 00		35 00				40 00		139 00		139 00
Diamond Electric Company	177 50		829 00		165 00		75 00		415 00		1,661 50		1,661 50
Elkinton, Joseph S. & Thomas	125 00						20 00				145 00		145 00
Germantown Electric Light Company	314 50		873 00		285 00		85 00		385 00		1,942 50		1,942 50
Girard Point Storage Company	73 50						25 00				98 50		98 50
Harrison Brothers & Co	76 50		44 00				12 50		15 00		148 00		148 00
Kensington Electric Company	235 00		344 00		15 00		60 00		145 00		799 00		799 00
Knickerbocker Ice Company	176 50						32 50				209 00		209 00
Manufacturers' Electric Company	829 50		945 00		100 00		180 00		570 00		2,624 50		2,624 50

Return of License Charges for Attachments to City Poles, etc.—Continued.

	Attachments.		Maintenance of Poles.		Erection of Poles.		Wire on City Poles.		Wires on other Poles and Buildings.		Total.		Total Charges.
	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	
Mutual Union Telegraph Company				$516 00						$840 00		$1,356 00	$1,356 00
Northern Electric Light and Power Company	$670 50		$680 00		$65 00		$195 00		$680 00		$2,290 50		2,290 50
Pennsylvania Railroad Company	68 00		82 00				10 00		152 50		312 50		312 50
Philadelphia Local Telegraph Company	86 50		409 00				12 50		150 00		658 00		658 00
Philad'a, Reading and Pottsville Telegraph Co		$66 50		122 00				$12 50		27 50		228 50	228 50
Pneumatic Fire Alarm Telegraph Company	18 50						2 50		50 00		71 00		71 00
Postal Telegraph Cable Company				290 00				10 00		545 00		845 00	845 00
Powelton Electric Company	657 00		1,437 00		280 00		155 00		535 00		3,064 00		3,064 00
Southern Electric Light and Power Company	650 00		1,744 00		310 00		205 00		995 00		3,904 00		3,904 00
Suburban Electric Company	199 00		1,836 00		25 00		65 00		890 00		3,015 00		3,015 00
United Gas Improvement Company	438 00		88 00		20 00		67 50		20 00		633 50		633 50
United States Electric Lighting Company	378 00		492 00				90 00		300 00		1,260 00		1,260 00
West End Electric Company	19 00		128 00				10 00		60 00		217 00		217 00
Western Union Telegraph Company	5 00			748 00			5 00			1,190 00	10 00	1,938 00	1,948 00
Wissahickon Electric Light Company	183 00		277 00		215 00		45 00		90 00		810 00		810 00
Totals	$7,439 50	$66 50	15,022 00	$1,939 00	$2,715 00		$1,802 50	$22 50	17,707 50	$2,635 00	44,686 50	$4,663 00	$49,349 50

Appropriation to the Department of Public Safety (Electrical Bureau) with the Expenditures and Balances for 1898.

Item.			Appropriated.	Countersign'd	Merging.
1	For Salaries:				
	Chief	$5,000 00			
	Manager	3,000 00			
	Assistant Manager	1,600 00			
	Assistant Manager	1,500 00			
	Chief Clerk	2,000 00			
	First Assistant Clerk	900 00			
	Second Assistant Clerk and Messenger	750 00			
	Stenographer and Typewriter	500 00			
	Draughtsman	1,000 00			
	Chief Line Inspector $1,200, Uniform $40	1,240 00			
	Eight Inspectors $1,180 each, Uniforms $40 each	9,760 00			
	Twenty Operators $1,100 each, Uniforms $40 each	22,800 00			
	Foreman $900, Uniform $40	940 00			
	Eight Linemen $850 each, Uniforms $40 each	7,120 00			
	Batteryman	900 00			
	Electrical Plumber $1,000, Uniform $40	1,040 00			
	Two Assistant Electrical Plumbers $900. Uniforms $40 each	1,880 00			
	Two Janitors $250 each	500 00			
		$62,480 00			
	Transferred from Ordinance approved Dec. 5, '98	900 00	$61,530 00	$61,421 60	$108 40
2	For repairs, instruments, supplies and labor	$15,000 00			
	Received by transfer, Ord. appd. July 12, 1898	350 00			
	Received by transfer, Ord. appd. Oct. 20, 1898	6,000 00	21,350 00	21,131 12	218 88
3	For iron posts, mast arms, hauling, supplies, materials and labor	$3,000 00			
	Transferred from by, Ord. appd. Dec. 5, 1898	600 00	2,400 00	2,347 38	52 62
4	For maintenance and keep of horse and wagon		400 00	400 00	
5	For keep of horse and wagon for Chief Line Inspector		400 00	400 00	
6	For acids, batteries and materials		6,000 00	5,935 90	4 10
7	For stationery, printing, advertising, car fares, car tickets and incidentals	$3,500 00			
	Received by transfer, Ord. appd. Oct. 20, 1898	800 00			
	Received by transfer, Ord. appd. Dec. 5, 1898	200 00	4,500 00	4,459 79	40 21

Appropriation, Expenditures and Balances—Continued.

Item.		Appropriated.	Countersign'd	Merging.
8	For painting telegraph poles, electric light poles, cross arms, mast arms and patrol booths	$3,000 00	$1,612 43	$1,387 57
9	For ice	150 00	108 45	41 55
10	For the improvement and extension of the Police and Fire Telegraph	7,000 00	6,994 80	5 20
11	For the purchase or rent of Telephones, purchase of materials and instruments, extension of the lines and hospital and armory service, including Brigade Headquarters National Guard of Pennsylvania, Presbyterian, Children's Homœopathic, St. Mary's, Orthopaedic, Samaritan, Jefferson, West Philadelphia for Women, Howard, St. Agnes, University, St. Christopher for Children, Women's Hospital, North College avenue and Twenty-second street, Jefferson Maternity, Washington Square, Seventh street below Locust, and Methodist Episcopal Hospital, and Naval Reserves Armory at one hundred dollars each per annum	7,500 00	7,470 71	29 29
12	For the improvement and extension of the Police Signal and Telephone Service	6,000 00	5,976 50	23 50
13	For cables, conduits, manhole covers, iron posts, mast-arms, hauling, cartage, materials and labor for underground electrical service: *Provided*, All manhole covers be deadened, $25,000 00 Received by transfer, ord. approved Oct. 20, 1898 6,000 00 Received by transfer, ord. approved Dec. 5, 1898 2,500 00	33,500 00	32,175 04	1,324 96
14	For labor, lamps, wiring, materials, current and repairs for police, patrol and fire stations, and fountain in Ontario Park	3,000 00	2,694 11	305 89
15	For electric lighting: *Provided*, One thousand dollars of this amount be expended for the lighting of South Broad street, between Christian street and Passyunk avenue (City conduits), from July 1, 1898 $851,000 00 Brought from books of 1897 5,951 75 $856,951 75 Transferred from by ord. approved Oct. 20, 1898 15,800 00 $841,151 75 Transferred from by ord. approved Dec. 5, 1898 6,574 00	834,577 75	827,660 01	6,917 74
16	For purchasing and laying underground conduits and constructing manholes.	30,000 00	29,959 27	40 73

Appropriation, Expenditures and Balances—Continued.

Item.		Appropriated.	Countersign'd.	Merging.
17	For rent of telephones with exchange service in offices of District Surveyors (Bureau of Surveys).... $1,800 00 Transferred from by ord. approved Dec. 5, 1898..... 1,000 00	$800 00	$760 00	$40 00
18	For new supply wagon and harness.....	300 00	296 72	3 28
19	To pay experts authorized to be appointed under Resolution of Councils, April 16, 1896.....	600 00	600 00	
	Totals.....	$1,023,007 75	$1,012,463 83	$10,543 92